OCR A-LEVEL ECONOMICS

ECONOMICS



EXAM QUESTION PACK

UNIT F584 OLD SPECIFICATION PAPERS

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OCR
Oxford Cambridge and RSA

Thursday 23 June 2016 – Afternoon

A2 GCE ECONOMICS

F584/01 Transport Economics

Candidates answer on the Question Paper.

OCR supplied materials:
None

Other materials required:
- Calculators may be used

Duration: 2 hours

Candidate forename		Candidate surname	

Centre number						Candidate number				

INSTRUCTIONS TO CANDIDATES

- Write your name, centre number and candidate number in the boxes above. Please write clearly and in capital letters.
- Use black ink. HB pencil may be used for graphs and diagrams only.
- Answer Section A and **one** question from Section B.
- Read each question carefully. Make sure you know what you have to do before starting your answer.
- Write your answer to each question in the space provided. If additional space is required, you should use the lined page(s) at the end of this booklet. The question number(s) must be clearly shown.
- Do **not** write in the bar codes.

INFORMATION FOR CANDIDATES

- The number of marks is given in brackets **[ ]** at the end of each question or part question.
- The total number of marks for this paper is **60**.
- The quality of your written communication will be taken into account in the marking of your answer to Section B.
- This document consists of **20** pages. Any blank pages are indicated.

A calculator may be used for this paper

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Rail services and the rail network in the UK

Britain's rail services and rail infrastructure used to be run by the government. This all started to change from 1994 with the first franchising of rail services. Since then, rail demand has continued to increase with a record number of passengers now using the railways.

In sharp contrast to the situation before 1994, most rail services are now provided by a range of companies in the private sector, known as train-operating companies. These companies are responsible for day-to-day train services. They do not, however, own the nation's rail infrastructure. This is provided by a separate company, Network Rail. As Fig. 1 shows, almost half of train-operating companies' revenue goes to Network Rail.

Where train operating companies' revenue goes

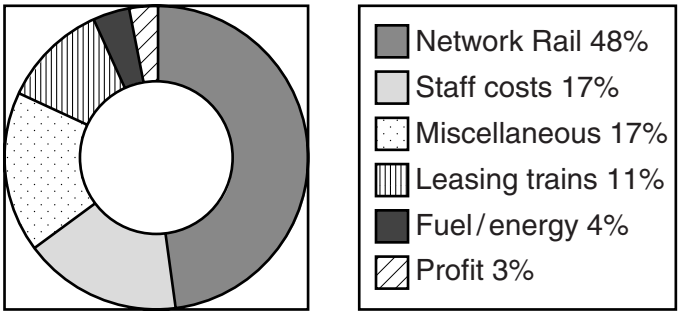


Fig. 1

Despite the growing importance of the private sector in the rail industry, the public sector still has an important role in regulating rail services and also in undertaking major transport infrastructure projects.

The following extract from a Department for Transport document outlines some of the government's plans for the rail industry.

'Expanding and improving the rail network'

Rail is vital to the UK's economic prosperity.

In addition, encouraging people to use trains rather than cars reduces carbon emissions.

Actions:

- Regulating some fares: the government regulates the existence and price of a number of rail fares. The government restricts the amount by which train operators can increase some fares each year.
- Upgrading rail tracks and stations: increasing train capacity with, for example, £240 million of improvements along the East Coast Main Line.
- Electrifying important routes: by 2020, around three-quarters of all rail passenger miles will be by electric train. This should lower CO_2 emissions, change journey times and reduce operating costs.
- Crossrail: a new railway running east to west through tunnels under London.

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SECTION A

Answer **all** parts of the question in this section.

1 **(a)** Explain the difference between fixed and variable costs, using **one** example of each from Fig. 1.

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..... **[4]**

(b) Explain how changes in train fares might affect the revenue of a train-operating company.

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..... **[4]**

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(c) Explain why **two** of the government's proposed actions (lines 17 to 25) may encourage people to use trains rather than cars.

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(d) Comment on the extent to which 'rail is vital to the UK's economic prosperity'.

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(e) Discuss whether or not there should be monopoly provision of rail infrastructure in the UK. **[8]**

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TURN OVER FOR SECTION B

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SECTION B

Answer **one** question.

2 **(a)** Explain, using a diagram, how the profit earned by a firm is influenced by the relationship between its marginal cost and its marginal revenue. **[15]**

(b) Discuss, using examples, the extent to which the market dominance of a monopoly provider of transport infrastructure will result in economic inefficiency. **[20]**

3 **(a)** Analyse the differences between monopolistic competition and oligopoly market structures in transport. **[15]**

(b) Discuss the extent to which air travel could be considered to be a sustainable mode of transport. **[20]**

4 **(a)** Analyse the economic effects of an increase in the demand for road transport on the environment. **[15]**

(b) Discuss the effectiveness of different policies implemented to deal with the problems caused by increased road transport use in urban areas. **[20]**

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SECTION B

Question No. .....

Start your answer to part **(a)** here.

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Start your answer to part **(b)** here.

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END OF QUESTION PAPER

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ADDITIONAL ANSWER SPACE

If additional space is required, you should use the following lined page(s). The question number(s) must be clearly shown in the margin(s).

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GCE

Economics

Unit **F584:** Transport Economics

Advanced GCE

Mark Scheme for June 2016

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All examiners are instructed that alternative correct answers and unexpected approaches in candidates' scripts must be given marks that fairly reflect the relevant knowledge and skills demonstrated.

Mark schemes should be read in conjunction with the published question papers and the report on the examination.

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Annotations

Annotation	Meaning
	Unclear
BOD	Benefit of Doubt
	Cross
EE	Effective evaluation
IR	Irrelevant
L1	Level 1
L2	Level 2
L3	Level 3
L4	Level 4
NAQ	Not answered question
SEEN	Noted but no credit given
TV	Too vague
	Tick
	Development of point

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Question			Answer	Marks	Guidance
1	(a)		**Explain the difference between fixed and variable costs using one example of each from Fig. 1.** 1 mark for each definition A fixed cost is one that does not change (in the short run) with output. A variable cost is a cost that changes with output. 1 mark for an example of each from Fig.1. A maximum of 1 mark is available for an example of one fixed cost and a maximum of 1 mark is available for an example of one variable cost.	4	Accept Network Rail as either Fixed or Variable Accept Staff as either Fixed or Variable as they could be core or peripheral staff **Fixed** Network Rail Staff Leasing **Variable** Network Rail Staff Fuel **Green tick for each mark awarded**
	(b)		**Explain how changes in train fares might affect the revenue of a train operating company.** 1 mark for the effect of changes in train fares is uncertain / can either increase or decrease revenue. 1 for recognising the influence of PED in determining changes in revenue e.g. it depends on PED / demand remains unchanged. 2 marks for a correct explanation of how PED determines changes in revenue following changes in train fares if demand is elastic. 2 marks for a correct explanation of how PED determines changes in revenue following changes in train fares if demand is inelastic.	4	Do not award simple statements that an increase / decrease in train fares results in an increase / decrease in revenue. **Green tick for each mark awarded**

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Question			Answer	Marks	Guidance
	(c)		**Explain why two of the governments proposed actions (lines 17 to 25) may encourage people to use trains rather than cars.** For example: The change in relative prices through regulation (1) leads to increased affordability of train use (1) Increased supply / seat availability due to increases in capacity (1) leads to lower average costs / lower opportunity cost / reduced train fares (1) The increased number of routes available / new routes available in London / improved routes (1) leads to improved quality e.g. greater speed / convenience / flexibility / improved customer service of trains (1). Reduced negative externalities /reduced pollution due to lower CO2 emissions of trains (1) leads to changes in tastes / increased awareness of environmental issues in favour of train use (1).	**4**	This is a 2+2 question. 1 mark for basic explanation of why the action selected may encourage people to use trains rather than cars. . 2 marks for good explanation of why the action selected it may encourage people to use trains rather than cars. Reward candidates who use relevant economic concepts to explain the changes such as increased XED, YED, closer substitutes. Be aware of candidates lifting comments from lines 17-25; there must be some development to gain credit. **Green tick for each mark awarded**

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Question			Answer	Marks	Guidance
	(d)		**Comment on the extent to which 'rail is vital to the UK's economic prosperity'.** **Two marks for analysing the extent to which 'rail is vital to the UK's economic prosperity':** • Moving people efficiently reduces costs of production and can lead to increased profits, employment and growth • Moving freight efficiently reduces costs of production and can lead to increased profits, employment and growth • Investment in infrastructure projects like HS1, HS2 and HS3 lead to an investment multiplier and growth • Reduced congestion on the road networks reduces costs of production and can lead to increased profits, employment and growth • Increased international competitiveness can lead to improvements in the Balance of Payments and increased profits, employment and growth • Increases in government revenue through increased profits, employment and growth. • Increased FDI • Reduced negative externalities / increased positive externalities if linked to improved resource allocation • Sustainable economic growth **Two marks for analysing the extent to which 'rail is *not* vital to the UK's economic prosperity':** • The supposed benefits could be restricted to certain parts of the country (HS2 route) • There is an opportunity cost to investment in the infrastructure and this must be considered • Other transport modes could be considered to be more efficient; this could be linked to externalities and under capacity	**5**	NOTE; this is a 2+2+1 question. 2 marks for analysing the extent to which 'rail is vital to the UK's economic prosperity'. 2 marks for analysing the extent to which 'rail is *not* vital to the UK's economic prosperity'. 1 mark for a clear conclusion / judgement being offered if both sides are analysed. 2 marks can be awarded for a developed point on either side. **Green tick for each analysis mark awarded.** **L4 for each counter-analysis mark awarded.** **EE for judgement mark.**

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Question			Answer	Marks	Guidance
			• Local and unprofitable services will not necessarily add to the UK's economic prosperity • Lack of flexibility/integration One mark is available for a judgement as to whether or not 'rail is vital to the UK's economic prosperity', e.g. it will not be the case unless it is integrated with other modes and the extent will be greater in times of economic prosperity. A supported judgement can gain this mark.		
	(e)		**Discuss whether or not there should be monopoly provision of rail infrastructure in the UK.** Up to eight marks are available for this question. **Up to 3 marks are available for relevant analysis of whether or not there should be monopoly provision of infrastructure:** • Infrastructure provision involves very high levels of fixed costs (1) and therefore the scope for economies of scale are significant (1) • Due to the nature of infrastructure provision, competition will be wasteful and therefore monopoly provision is preferred (1) • Natural monopoly argument (1) to maximise possible benefits from economies of scale (1), there should be just one provider producing at a very large level of output /duplication of resources is avoided (1) • A monopoly may take a longer term perspective/ have a greater sense of security (1) and so may be more likely to invest than a more competitive market (1) Any one point which is clearly developed can gain up to three marks maximum. Alternatively, the identification of three separate but relevant points of analysis can also gain all three analysis marks.	**8**	NOTE: this is a 3+3+2 question. The final 2 marks are only available if two sided analysis is already present. If the question is not answered in the context of 'rail infrastructure' e.g. tracks, signals, stations, Network Rail then a maximum of 2+2+2 should be awarded. Accept benefits of increased competition as counter-analysis. Award analysis that uses efficiency concepts on either or

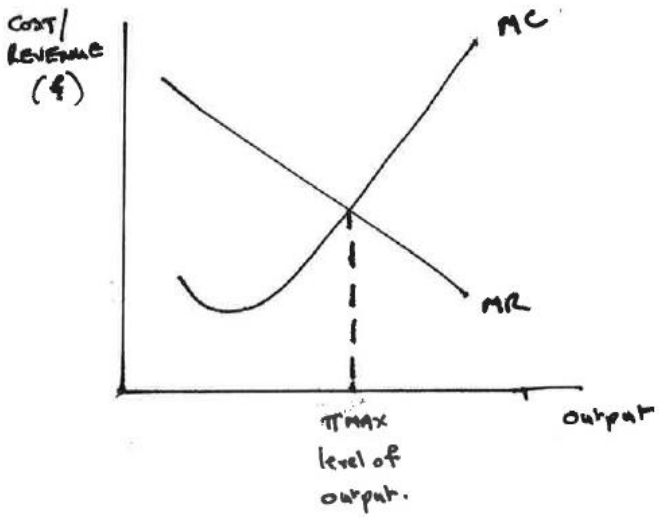
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Question			Answer	Marks	Guidance
			A further 3 marks are available for analysis of possible drawbacks/ limits to monopoly provision of infrastructure: • Monopoly provision eliminates competitive pressure which could lead to complacency (1) • Monopoly can lead to higher average costs due to diseconomies of scale (1) with production taking place at a level of output above the Minimum Efficient Scale (1). • Monopoly may reduce the quality of the service (1) and not be very responsive to changes in consumer demand due to lack of substitutes (1). Accept theory of the firm diagrams showing production at a level of output where P>MC and not at minimum AC. <u>A further 2 marks are available for a judgement. These marks are awarded as follows</u>: <u>1 mark for a simple statement</u> supported by two-sided analysis, • "In conclusion, infrastructure should be provided by a monopolist". • "Overall, monopoly provision of infrastructure would not be beneficial" <u>2 marks for a developed statement</u> – for example: • "Monopoly provision of infrastructure will be beneficial as long as the monopolist is regulated by the government in order to ensure that there is an element of control over pricing" • "If entirely depends upon the level of output of the monopolist. If output is too high then monopoly provision may not be beneficial as there will be significant diseconomies of scale"		**Green tick for each analysis mark awarded.** **L4 for each counter-analysis mark awarded.** **EE for each judgement mark.**both sides.

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Question			Answer	Marks	Guidance	
					Content	Levels of response
2	(a)		**Explain, using a diagram, how the profit earned by a firm is influenced by the relationship between its marginal cost and its marginal revenue** <u>An accurate diagram using just a MC curve (upward sloping) and an MR curve (downward sloping) gains 9 marks (see e.g. on next page).</u> Candidates are expected to identify the profit maximising level of output at the level of output where MC =MR. Accept a perfect competition approach with perfectly elastic demand (AR and MR) curves. For written L3 analysis; Candidates should analyse that when the level of output is below the profit maximising level the MR will be greater than MC. This means that there will be an addition to the amount of profit. This process will continue until MC = MR. Similarly at any output beyond the profit maximising level MC is greater than MR and total profit will fall. Thus this decision to increase output will move the firm away from the profit maximising level and reduce profit.	15	Correct diagram without correct and relevant explanation beyond identification of MC = MR. Max 9 marks Written analysis can gain L3 without accurate diagram (max 13) Maximum mark without diagram 9.	**Level 3 (9-15 marks)** 13-15 marks. Good analysis two or more explanations 11-12 marks. Good analysis of one explanation or basic analysis of two. 13-15 marks. Good analysis two or more explanations 9-10 marks. Basic analysis of one explanation or accurate diagram **Level 2 (5-8 marks)** Application of knowledge. In this case an answer which applies the concept of marginal cost and marginal revenue to a firm. 7-8 marks = inaccurate diagram (not correctly labelled) identifying profit maximising level of output and understanding of MC and MR. 5-6 marks= inaccurate diagram (not correctly labelled) identifying profit maximising level of output and/or understanding of MC and/or MR. **Level 1 (1-4 marks)** Knowledge and understanding of what is meant by marginal cost, marginal revenue and abnormal profit.

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Question			Answer	Marks	Guidance	
					Content	**Levels of response**
			Diagram  		Candidates who produce the full set of curves MC, MR, AC and AR can be awarded full marks as long as the analysis is based on the relationship between MC and MR at different levels of output. **Horizontal axis; Accept quantity**	

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Question			Answer	Marks	Guidance	
					Content	Levels of response
2	(b)		**Discuss , using examples, the extent to which the market dominance of a monopoly provider of transport infrastructure will result in economic inefficiency** The focus on the question is on economic inefficiency/ efficiency. Candidates are expected to analyse why the market dominance of at least two monopoly providers of transport infrastructure will result in economic inefficiency AND any potential efficiency gains from a monopoly provider. To reach L4, analysis of BOTH sides is needed and a discussion which includes a judgement as to the extent of the inefficiency. **Analysis of why a monopoly provider of transport infrastructure will result in decreased economic efficiency:** Profit maximising monopolies are allocatively and productively inefficient with under production and no competitive incentive to produce at minimum AC. This can lead to monopolies not producing at the lowest possible average cost, AC remains high with low output leading to inefficiency. The complacency of a monopolist can lead to 'X' inefficiency, low staff motivation, management and communication problems. The complacency of a monopolist leads to dynamic inefficiency due to a lack of competitive pressure.	**20**	Level 4 (a) – for this level there must be a reasoned judgement as to the question of 'extent', based on previous sound analysis of a two sided discussion Level 4 (b) – for this level, there must be a two sided discussion of whether monopoly raises economic efficiency. Award 13-15 marks where there is clear, balanced discussion of both sides Award 11-12 marks where there is only basic discussion. For example, following clear analysis of one side there is only a simple evaluative statement made giving the opposite viewpoint.	**Level 4 (a) [16-20]** For a discussion as to whether or not the market dominance of a monopoly provider of transport infrastructure will result in economic inefficiency. Includes a clear judgement which attempts to weight the evidence. NOTE: To reach L4(a) balanced discussion must already be present. 18-20 marks: *Balanced discussion with good judgement*. 16-17 marks: *Balanced discussion with weak judgement*. **Level 4 (b) [11-15]** Discussion of whether or not the market dominance of a monopoly provider of transport infrastructure will result in economic inefficiency. An answer which develops both sides in some depth but fails to introduce a judgement gains 13-15 marks An answer which analyses one side very clearly (e.g. it is efficient) and then hints in a very basic manner at the other side (e.g. not efficient) gains 11-12

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Question			Answer	Marks	Guidance	
					Content	Levels of response
			Analysis of why a monopoly provider of transport infrastructure could potentially result in increased economic efficiency The theory of natural monopoly can be used to explain the exploitation of the efficiency gains that come from very large scale production and the associated economies of scale. Supernormal profits could be used to invest in Research and Development (R&D) that could lead to efficiency gains and higher productivity. These dynamic efficiencies can lead to lower prices and an increase in consumer surplus. **The judgement as to the extent of the inefficiency could include a discussion of:** The level of potential contestability and the threat of contestability leading to greater efficiency. The monopolist's objective as a nationalised industry could be to set P=MC rather than MR=MC thus leading to allocative efficiency. Depends on the transport mode e.g. airports may be more efficient with competition. The extent to which monopolies are regulated in their ability to restrict fares and dictate their level of provision.		Level 3: An answer which only considers why a monopolist will increase economic efficiency can gain up to 10 marks maximum for analysis Answers lacking ANY transport application will gain marks at the bottom of the Level reached. Answers with one example only are capped at (13) if balanced discussion and 16 if balanced with a judgement. Level 2 answers may simply identify the costs or benefits of monopoly without making any reference to efficiency Level 1 will simply state what monopoly and/or economic efficiency is	**Level 3 [5-10]** Analysis of why the market dominance of a monopoly provider of transport infrastructure will result in economic efficiency/inefficiency – a purely one sided answer. Answers which fail to analyse specific types of economic efficiency will gain 7 marks maximum. **Level 2 [3-4]** For the application of knowledge and understanding of why the market dominance of a monopoly provider of transport infrastructure will result in economic inefficiency. Answers in this level may simply identify types of efficiency or identify some of the characteristics of a monopoly. **Level 1 [1-2]** For knowledge and understanding of monopoly and/or economic efficiency only e.g. general definitions of monopoly or efficiency

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Question			Answer	Marks	Guidance	
					Content	**Levels of response**
3	**(a)**		**Analyse the differences between monopolistic competition and oligopoly market structures in transport.** Candidates will be expected to analyse the main differences between the two market structures. **Differences include:** • Barriers to entry: low in monopolistic competition, high in oligopoly • Number of firms: high in monopolistic competition, low in oligopoly • Demand curve: monopolistic competition has a normal, downwards sloping demand curve, whilst oligopoly has a kinked demand curve • Monopolistic competition always produces where MC=MR (ie always aims for profit max) whilst oligopoly may well have non-profit max. objectives • Interdependence in oligopoly not in monopolistic competition.	**15**	Identification of differences = Level 1 Identification AND explanation of differences =Level 2 Analysis of WHY each difference exists = Level 3	**Level 3: (9 – 15 marks)** For clear analysis of possible differences between the two market structures. 13 – 15: *Very good analysis*: good analysis of two differences. 11 – 12: *Good analysis*: Good analysis of one difference OR basic analysis of two. 9 – 10: *Basic analysis*: basic analysis of one difference. **Level 2: (5 – 8 marks)** For an application of knowledge and understanding of the characteristics of the two market structures. 7-8 marks: *Good application*: Two characteristics identified and explained. 5-6 marks*: Basic application*: One characteristic identified and explained. Answers in Level 2 may also identify and explain differences **but will not analyse** these. In other words, such answers will describe the difference rather than analysing it.

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Question			Answer	Marks	Guidance	
					Content	Levels of response
			Analysis of these could include: Oligopoly markets have high barriers to entry (L1), in sharp contrast to the low barriers to entry in monopolistic competition (L2). This means that new firms will be able to enter monopolistic competitive markets whilst this is not the case in oligopoly markets (basic L3). The consequence of this is that in monopolistic competition in the LR, firms only make normal profits. This results in there being more firms in the market in LR monopolistic competition whilst in oligopoly markets there will still be only a small number of firms (good L3). Monopolistic competition has a normal downwards sloping demand curve (L1) whilst oligopoly may have a kinked demand curve (L2). This means that there is likely to be considerable price rigidity in oligopoly markets whilst in monopolistic competition there is likely to be price competition between firms (L3).			**Level 1: (1 – 4 marks)** For knowledge of the characteristics of these market structures. Simple knowledge of one market structure = 1-2 marks Knowledge of both market structures = 3-4 marks.

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Question			Answer	Marks	Guidance	
					Content	**Levels of response**
	(b)		**Discuss the extent to which air travel could be deemed to be a sustainable mode of transport.** Candidates will be expected to analyse why air travel is AND is not sustainable. A**nalysis of why it is sustainable includes:** • Air travel can carry large numbers of passengers and therefore minimise possible negative externalities arising from other forms of transport. With fewer negative externalities there will be a more sustainable allocation of scarce resources • Air travel will not suffer from congestion in the way that other modes might. Therefore there will be a more allocatively efficient (and sustainable) allocation of scarce resources. • Use of APD (or similar tax) makes it more sustainable – possible hypothecation of funds. • Competition may encourage improved allocation of resources i.e. less waste.	**20**	**Level 4(a): possible judgement includes:** The level of sustainability depends upon: The development and use of alternative (renewable) aviation fuel sources. The government's role and commitment to regulation and promotion of sustainable activities in the industry. Developments in sustainability enhancing technology in the airline industry. Investment in relevant R & D in the airline industry. Short haul less sustainable than long haul.	**Level 4(a): (16 – 20 marks)** For a discussion which includes a judgement as to how sustainable air travel is as a mode of transport. NOTE: To reach L4(a) balanced discussion must already be present. 18-20 marks: *Balanced discussion with good judgement*. 16-17 marks: *Balanced discussion with weak judgement*. **Level 4(b): (11 – 15 marks)** For discussion of how sustainable air travel is. Two sided economic analysis. 13-15 marks: *Balanced discussion* with some air transport application. 11-12 marks: *Basic discussion* (two sided analysis but one side is only basic)

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Question			Answer	Marks	Guidance	
					Content	Levels of response
			Analysis of why it is not sustainable includes: • Some air travel may well be underused with aircraft flying with very low levels of usage / small numbers of passengers. Such services will not be providing an efficient allocation of scarce resources – hence non sustainable. • Aircraft using traditional aviation fuels use up scarce resources which is non-sustainable. Accept market failure / overconsumption analysis.			**Level 3: (5 – 10 marks)** One sided analysis. In other words, analyses EITHER that air travel is OR is not sustainable. 8-10 marks: *Good analysis*: one sided analysis which is good. 5-7 marks: *Basic analysis*: one sided analysis which is only basic in nature. (Answers which lack application to air travel will be at the bottom of the band ie either 5 or 8 marks) **Level 2: (3 – 4 marks)** For an application of knowledge and understanding of how sustainable air travel is. Answers in this level will offer statements applying sustainability without analysing these. **Level 1: (1 – 2 marks)** For knowledge and understanding of sustainability.

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Question			Answer	Marks	Guidance	
					Content	**Levels of response**
4	**(a)**		**Analyse the economic effects of an increase in the demand for road transport on the environment.** Possible economic effects of increased demand for road transport on the environment include: • Increased congestion leading to a possible increase of harmful emissions • Increased negative externalities (accept as a separate / different point to congestion) **Analysis of these could include:** Increased congestion (L1) arises as roads reach full capacity and then queuing results as a result of excess demand (L2). This imposes costs upon innocent third parties or examples such as government, local residences, NHS and workers without specific reference to third parties (basic L3). Increased negative externalities occur (L1). With more demand for road transport there will be increased environmental costs/benefits such as pollution/noise/loss of habitat/reduced biodiversity(L2) imposed upon third parties / or examples such as government, local residences, workers without specific reference to third parties (basic L3). Analysis in terms of allocative inefficiency arising due to the overconsumption leading to market failure (good L3).	**15**	Identification of possible effects = Level 1 Identification AND explanation of possible effects = Level 2 Analysis of the economic impact = Level 3 Reward analysis of reducing sustainability due to increases in demand for road transport.	**Level 3: (9 – 15 marks)** For clear analysis of the economic effects of increased demand for road transport on the environment. 13 – 15: *Very good analysis*: good analysis of two or more economic effects of increased demand on the environment. 11 – 12: *Good analysis*: Good analysis of one economic effect OR basic analysis of two. 9 – 10: *Basic analysis*: basic analysis of one economic effect of increased demand for road transport on the environment. **Level 2: (5 – 8 marks)** For an application of knowledge and understanding of the effects of an increase in demand for road transport. 7-8 marks: *Good application*: 2 or more relevant reasons are identified and explained. 5-6 marks: *Basic application*: 1 relevant economic effect identified and explained.

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Question			Answer	Marks	Guidance	
					Content	Levels of response
			Under-pricing/ social costs not considered / only consider private costs / ignore external costs leads to overconsumption and misallocation of resources/ allocative inefficiency (good L3) Increased road construction (L1) has impact on environment in terms of land use, use of non-renewable resources, accessibility (L2) Analysis in terms of third party effects and overconsumption.			Answers in this level will identify and explain possible effects but will fail to <u>analyse</u> the impact upon the environment. As soon as 2 or more effects are identified and explained then 7-8 marks will be rewarded. **Level 1: (1 – 4 marks)** For knowledge and understanding of possible economic effects. One economic effect correctly identified and with some additional knowledge will receive 1 – 2 marks whilst answers which identify several relevant effects will gain 3 – 4 marks.

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Question			Answer	Marks	Guidance	
					Content	Levels of response
	(b)		**Discuss the effectiveness of different policies implemented to deal with the problems caused by increased road transport use in urban areas.** This is a deliberately broad question. Candidates are expected to draw upon their knowledge of how different countries have responded to congestion and to analyse how different policies work before analysing possible limitations of these policies. **Possible policies include (NOTE: this is by no means an exhaustive list!):** • Road pricing / charging in Singapore, Norway, UK (London/Durham) • Subsidies to public transport • Integration of different modes of public transport such as in Utrecht • Nationalisation of key modes of transport OR policies to encourage increased competition amongst private sector service providers **Analysis of policies include:** • Relevant diagrams (L2) showing the impact of road-user charging / ERP on levels of consumption with explanation (L3) • Written analysis of how these policies aim to internalise any externalities (L3) • Written analysis of how subsidies to public transport aim to deal with the problems of increased road transport use in urban areas (L3)	**20**	**Level 4(a): possible judgement includes:** Often such policies if used in isolation will be much less effective than an integrated solution using appropriate technology Just because a policy is successful in one country/location it does not necessarily mean that it can be successfully replicated elsewhere. There needs to be political will. Answers with one policy only are capped at (13) if balanced discussion.	**Level 4(a): (16 – 20 marks)** For a discussion which includes a judgement as to how effective solutions have been in different countries/locations. NOTE: To reach L4(a) balanced discussion must already be present. 18-20 marks: *Balanced discussion with good judgement*. 16-17 marks*: Balanced discussion with weak judgement*. **Level 4(b): (11 – 15 marks)** For discussion of the extent to which policies have been effective in reducing road transport use. Two sided economic analysis. 13-15 marks: *Balanced discussion* with some transport application 11-12 marks: *Basic discussion* (two sided analysis but one side is only basic)

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Question			Answer	Marks	Guidance	
					Content	Levels of response
			• Written analysis of how an integrated transport policy may be successful in reducing demand for car use (L3). • Written analysis of promotion of alternative provision such as car-pooling or encouraging video conferencing / working from home (L3). A description of how these policies work should only be awarded L2 **Analysis of limitations include:** • With inelastic PED (L2), road-user charging and ERP will be less effective in reducing levels of consumption (L4) • Policies such as subsidies will be less effective where YED is negative (L2) (such as is arguably the case with buses) as during times of rising demand, subsidies will not be effective at increasing demand) (L4) • With a lack of quality public transport alternatives to the car, policies such as ERP will be less effective (L2) As goods are weak substitutes/use of XED (L4) • With a lack of information on alternative provision such as car-pooling or encouraging video conferencing / working from home these will be ineffective (L2) as PED remains inelastic (L4).			**Level 3: (5 – 10 marks)** One sided analysis. In other words, analyses why the policy is OR is not successful. 8-10 marks: *Good analysis*: one sided analysis of why policy is OR is not successful. 5-7 marks: *Basic analysis*: one sided analysis which is only basic in nature. (Answers which lack transport application will be at the bottom of the band ie either 5 or 8 marks) **Level 2: (3 – 4 marks)** For an application of knowledge and understanding of possible policies. **Level 1: (1 – 2 marks)** For knowledge and understanding of one possible policy solution.

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Friday 19 June 2015 – Morning

A2 GCE ECONOMICS

F584/01 Transport Economics

Candidates answer on the Question Paper.

OCR supplied materials:
None

Other materials required:
- Calculators may be used

Duration: 2 hours

* F 5 8 4 0 1 *

* 1 0 9 6 7 1 7 2 8 1 *

Candidate forename		Candidate surname	

Centre number						Candidate number				

INSTRUCTIONS TO CANDIDATES

- Write your name, centre number and candidate number in the boxes above. Please write clearly and in capital letters.
- Use black ink. HB pencil may be used for graphs and diagrams only.
- Answer Section A and **one** question from Section B.
- Read each question carefully. Make sure you know what you have to do before starting your answer.
- Write your answer to each question in the space provided. If additional space is required, you should use the lined pages at the end of this booklet. The question number(s) must be clearly shown.
- Do **not** write in the bar codes.

INFORMATION FOR CANDIDATES

- The number of marks is given in brackets **[ ]** at the end of each question or part question.
- The total number of marks for this paper is **60**.
- The quality of your written communication will be taken into account in the marking of your answer to Section B.
- This document consists of **20** pages. Any blank pages are indicated.

A calculator may be used for this paper

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Turn over

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2

Transport taxes

The UK government applies taxation throughout the transport market in order to change behaviour and to raise revenue.

These taxes include excise duty on the purchase of petrol and diesel, Vehicle Excise Duty on cars (generally known as road tax) and the most recent tax, Air Passenger Duty (APD).

APD is an indirect tax which is charged on each individual passenger flying from UK airports. It was first introduced in 1994 and is now charged at four different 'bands' depending on the distance of the flight. The UK is not the only country with such an indirect tax. Other European countries have similar taxes. Ireland has an Air Travel Tax and Germany introduced a departure tax in January 2011.

The following article discusses the impact of APD on the UK economy. It is followed by Fig. 1 which shows the changes in passenger numbers and the level of APD revenues since 2003/4.

APD: a tax on all your dreams

The growth of low-cost airlines followed deregulation of European Union (EU) air transport in the 1990s and resulted in increased competition in the air passenger market. As a result, air travel became more affordable and British families started to travel longer distances for their annual holiday. Twenty years later, after a succession of increases in APD, up by as much as 333% in six years, you could be forgiven for thinking that the government was trying to make flying, once again, a luxury.

The number of passengers taking flights from UK airports fell between 2007 and 2010. Air passengers flying from the UK are already the most heavily taxed in the world. On average they pay almost nine times more duty than people flying from other European airports. In fact the UK Treasury collected almost twice as much in passenger taxes in 2011 than all other European countries combined.

The Chancellor of the Exchequer has received many complaints about APD. These include those from businesses, tourist boards, MPs, the British Chambers of Commerce and the World Tourism Council.

Year	Total passengers (millions)	Total revenue from APD (£millions)
2003/4	90.9	791
2004/5	98.1	864
2005/6	102.5	905
2006/7	106.1	971
2007/8	107.9	1994
2008/9	102.1	1862
2009/10	96.7	1856
2010/11	93.7	2155
2011/12	97.9	2605

Fig. 1 – Passenger numbers and APD revenue 2003/4–2011/12

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SECTION A

Answer **all** parts of the question in this section.

1 **(a)** Fig. 1 shows that between 2007/8 and 2010/11 the total number of passengers flying from UK airports fell.

Other than the increase in Air Passenger Duty (APD), state and explain **one** reason why this might have happened.

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..... **[2]**

(b) **(i)** Using a diagram, explain the impact of an indirect tax such as APD on the market for air travel.



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..... **[4]**

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(ii) Other than raising government revenue, state and explain **one** argument in favour of imposing APD.

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..... **[2]**

(iii) State and explain **two** arguments against imposing APD.

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[4]

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(c) Comment on the usefulness of Gross Domestic Product data when forecasting demand in the air transport market.

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(d) Discuss whether or not increasing competition in the provision of air transport services is beneficial to passengers. **[8]**

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SECTION B

Answer **one** question from this section.

2 **(a)** Analyse, using examples, why some transport markets are considered to be 'natural monopolies'. **[15]**

(b) Discuss whether or not the provision of a high quality service for consumers should be the aim of firms in transport markets. **[20]**

3 **(a)** Analyse economies and diseconomies of scale which arise in transport markets in the UK. **[15]**

(b) Discuss the extent to which the UK freight transport market is contestable. **[20]**

4 **(a)** Other than Gross Domestic Product data, analyse the factors economists would consider when forecasting the demand for bus usage in the UK. **[15]**

(b) Discuss the effectiveness of regulation and subsidies as policies to encourage more people to travel on public transport. **[20]**

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SECTION B

Question No. .....

Start your answer to part **(a)** here

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Start your answer to part **(b)** here

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END OF QUESTION PAPER

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ADDITIONAL ANSWER SPACE

If additional answer space is required, you should use the following lined page(s). The question number(s) must be clearly shown in the margins.

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GCE

Economics

Unit **F584:** Transport Economics

Advanced GCE

Mark Scheme for June 2015

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This mark scheme is published as an aid to teachers and students, to indicate the requirements of the examination. It shows the basis on which marks were awarded by examiners. It does not indicate the details of the discussions which took place at an examiners' meeting before marking commenced.

All examiners are instructed that alternative correct answers and unexpected approaches in candidates' scripts must be given marks that fairly reflect the relevant knowledge and skills demonstrated.

Mark schemes should be read in conjunction with the published question papers and the report on the examination.

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Annotations

Please annotate **every** response, even if no credit is given.

Annotation	Meaning
	Valid point
	Incorrect
	Unclear
BOD	Benefit of doubt
EE	Effective evaluation
IR	Irrelevant
L1	Level 1
L2	Level 2
L3	Level 3
L4	Level 4
NAQ	Not answered question
SEEN	Noted but no credit given
TV	Too vague

Highlighting is also available to highlight any particular points on the script.

'**BP**' to be inserted on <u>every</u> blank page

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Subject-specific Marking Instructions

Some questions may have a 'Level of Response' mark scheme.

The following guidelines on the **quality of written communication** are embedded into the Levels of Response mark scheme used for part (b) of the essays and should be applied consistently between the different essays:

Level 4: Complex ideas have been expressed clearly and fluently using a style of writing which is appropriate to the complex subject matter. Sentences and paragraphs, consistently relevant, have been well structured, using appropriate technical terminology. There may be few, if any, errors of spelling, punctuation and grammar.

Level 3: Relatively straightforward ideas have been expressed with some clarity and fluency. Arguments are generally relevant, though may stray from the point of the question. There will be some errors of spelling, punctuation and grammar, but these are unlikely to be intrusive or obscure meaning.

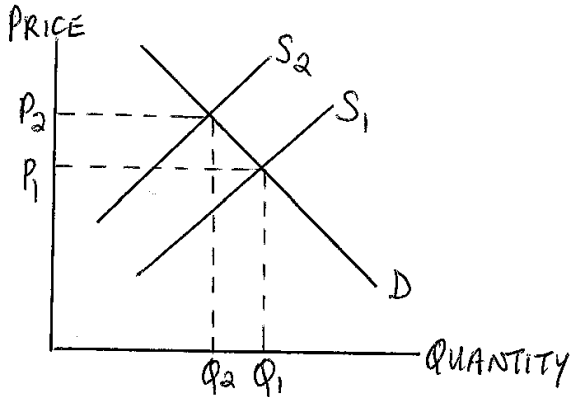
Level 2: Some simple ideas have been expressed in an appropriate context. There are likely to be some errors of spelling, punctuation and grammar of which some may be noticeable and intrusive.

Level 1: Some simple ideas have been expressed. There will be some errors of spelling, punctuation and grammar.

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Question			Answer	Marks	Guidance
1	(a)		**Fig. 1 shows that between 2007/8 and 2010/11 the total number of passengers flying from UK airports fell. Other than the increase in Air Passenger Duty (APD), state and explain one reason why this might have happened.** <u>Indicative content:</u> • recession/global economic slowdown / falling incomes • falling price of substitutes • changing preferences • falling consumer confidence – hence, fewer people taking holidays • better weather in the UK – hence, more people holidaying in the UK • effective marketing by UK destinations – hence, more people holidaying in the UK • increasing ticket prices (accept increased oil prices) <u>Exemplar response:</u> Recession (1) means that UK consumers have lower disposable incomes and, therefore, cut back on holidays, perhaps no longer travelling abroad on holiday (1).	2	One mark for a correct identification, plus a further one mark for an explanation. Nothing for reference to population (decreasing).

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Question			Answer	Marks	Guidance
	(b)	(i)	**Using a diagram, explain the impact of an indirect tax such as APD on the market for air travel.** Up to two marks are available for a correct diagram:  One mark for shifting the supply curve to the left. One mark for identifying the new equilibrium (new S curve original D curve) at a higher price/lower equilibrium quantity. MUST clearly label new equilibrium such as P2/Q2. Up to two marks for an explanation: • an indirect tax has the effect of raising costs of production (1) • firms have less incentive to supply and, hence, reduce supply (1) • the price increases and the quantity falls (1) • increasing tax can internalise the external cost / raise MPC / MSC	4	Up to two marks for a diagram. Correct labels on axis required for 2 marks. If macro labels or no labels on axis max 1 for diagram. If AD/AS curves used then no marks. If only quantity demanded or quantity supplied on x axis then max 1 mark. Accept MPC / MSC for S curve. Accept parallel or diverging shift of S curve. Up to two marks for an explanation. Maximum four marks.
		(ii)	**Other than raising government revenue, state and explain one argument in favour of imposing APD.** Indicative content: • it forces consumers to internalise their negative externality. • Increases the private costs to be close to social cost. • as a green tax, it reduces the consumption of flights which create negative externalities / increases sustainability.	2	One mark for a correct identification, plus a further one mark for an explanation. No mark for a reference to hypothecation

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Question			Answer	Marks	Guidance
			• by reducing overconsumption, APD will generate a more efficient allocation of resources. • It creates the incentive for a modal shift to more efficient means. Exemplar response: APD forces consumers to be more aware of the true social costs of flying (1). As such, this will reduce consumption of flights and, therefore, reduce allocative inefficiency (1).		
		(iii)	**State and explain two arguments against imposing APD.** Indicative content: • it is regressive • it is inflationary • it is difficult to set at the correct level (ie equal to external costs) and, as such, government failure is likely to arise. • if PED is inelastic, it will be ineffective in reducing the number of people flying. • The XED to trains and boats is likely to be inelastic • If the tourism industry lose demand, then they may have to make people redundant or investment may fall or related impact on economic growth due to tourists staying away. • if airline industries lose demand, then they may have to make people redundant or investment may fall. • negative effects on UK firms with overseas operations • the tax revenue is not hypothecated into viable substitutes • it should be a tax on emissions to correct the market failure • it is not set internationally • costs of implementation • less tourism to long haul developing countries Exemplar response: APD is a flat rate tax which takes no account of an individual's income. It is, therefore, a regressive tax (1). As such, it takes a higher proportion of income from low income groups than it does from high income groups (1).	4	One mark for each correct identification up to a maximum of two identifications, plus a further one mark for each of two explanations. NOTE: the explanation MUST be explicitly linked to APD. In other words, the explanation offered must be in the context of airlines.

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Question	Answer	Marks	Guidance
(c)	**Comment on the usefulness of Gross Domestic Product data when forecasting demand in the air transport market.** <u>Two marks are available for analysing how GDP data is used when forecasting future demand in the air transport market</u>: • if GDP is expected to rise then household disposable incomes will rise (1) and, therefore, the demand for air transport will increase as people can afford more holidays and foreign travel (1) • with increased disposable incomes, more people buy goods and services from firms (1) and, therefore, there is more demand for air transport to move these goods to market. (Accept references to air transport being a derived demand.) (1) <u>Two marks are available for analysis of problems of using GDP data</u>: Other factors also need to be taken into account such as fuel prices, population growth, industrial output and the level of imports into the country (1). Therefore, GDP alone will not give a complete picture (1). GDP growth is not distributed equally (1) and therefore may have little impact if concentrated amongst those who already fly regularly (1). GDP data may be inaccurate and is often volatile (1). Therefore, using this data without any other information may provide an inaccurate forecast of future demand (1). <u>One mark is available for a clear conclusion/judgement</u> as to whether or not GDP is effective when making forecasts. For example, “when used in conjunction with other data, GDP can be very useful but when used in isolation/alone then it is of more limited use”.	5	Up to five marks. This is a 2+2+1 question. Up to two marks for analysing how GDP can be used when making forecasts. Up to two marks for analysing the problems/ limitations of using GDP to make forecasts. 1 well developed piece of analysis can gain 2 marks. Up to 1 mark for clear conclusion / judgement Maximum of 1 + 1 if no references to the air transport market. If no analysis then 0 marks. One mark for a clear conclusion/judgement being offered in the context of the air transport market.

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Question	Answer	Marks	Guidance
(d)	**Discuss whether or not increasing competition in the provision of air transport services is beneficial to passengers.** <u>Up to three marks are available for relevant analysis of whether or not increasing competition in air transport services has been beneficial</u>: • leads to lower prices • result in increased consumer surplus • greater choice with new routes possibly being developed • productive efficiency occurs as firms need to produce at minimum AC in order to sell at the lowest possible price to passengers • allocative efficiency occurs as firms want to sell exactly those goods and services which passengers wish to purchase (otherwise they would go bankrupt) • dynamic efficiency leading to non-price competition results in increased quality and possible passenger gains from innovation • accept traditional theory of the firm analysis in terms of the move towards a perfectly competitive market raising efficiency • alternatively, accept supply and demand analysis which analyses the benefits of increased competition in terms of a rightwards shift of the supply curve Any one point which is clearly developed can gain up to three marks maximum. Alternatively, the identification of three separate but relevant points of analysis can also gain all three analysis marks. <u>A further three marks are available for analysis of possible drawbacks/ limits to increasing competition</u>: • loss of supernormal profits may lead to lower levels of R & D – hence, lower levels of investment by firms and potential loss of dynamic efficiency gains • with a larger number of smaller firms present in markets, there will be the possible loss of economies of scale – hence firms may, in fact, be less productively efficient. • with the need to lower costs of production, firms may well cut corners (ie health and safety risks?) OR may well ignore external costs – hence, market failure may occur due to negative externalities	8	Up to eight marks. NOTE: this is a 3+3+2 question. Up to 3 marks for analysing whether increasing competition in the provision of air transport services is beneficial to passengers. Up to 3 marks for counter analysis of whether increasing competition in the provision of air transport services is beneficial to passengers. One well developed piece of analysis can gain 2 marks. Up to 2 marks for clear conclusion / judgement Increased economic efficiency must be explicitly explained not simply a list of types of efficiency. The final two marks are only available if two sided analysis is already present.

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Question			Answer	Marks	Guidance
			A further two marks are available for a conclusion/judgement. These marks are awarded as follows: One mark for a simple statement – for example: • "In conclusion, increasing competition has been beneficial" • "Overall, increasing competition has not been beneficial" Two marks for a developed statement – for example: • "The impact of increased competition will be beneficial as long as it is sustained in to the long run. Some transport markets have seen short bursts of competition in the short run which has not been maintained and often markets have returned to oligopoly type structures." • The threat of contestability can be more important than the actual competition itself. • "It entirely depends upon the scale of increased competition. If just one or two extra firms join the air transport market then this will not necessarily result in a significant change in the market but a large number of new entrants is much more likely to generate a beneficial impact on consumers." • In order for competition to be beneficial it requires regulation to stop firms cutting corners.		

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Question			Answer	Marks	Guidance	
					Content	**Levels of response**
2	(a)		**Analyse, using examples, why some transport markets are considered to be 'natural monopolies'.** Candidates need to analyse the different features/ characteristics. **Relevant characteristics/features include:** • a situation where one firm has an overwhelming cost advantage • one firm gains substantial economies of scale OR one firm has a significant cost advantage over other firms in the industry • an industry which has substantial fixed costs OR an industry where past ownership of capital resources means that it is difficult and extremely expensive to duplicate **Relevant <u>analysis</u> of these could include:** High fixed costs exist (L1) which means that as a firm increases output, average fixed costs continuously decline (L2). Hence, it is more efficient to have just one firm producing at a high level of output in order to minimise average costs / prevent using excessive resources (L3) <u>OR</u> to achieve allocative / productive efficiency (L3). Natural monopolies have huge economies of scale (L1). These firms continuously enjoy lower average costs as output rises (L2). Hence, it is most efficient to have just one firm producing in the market – hence, achieving productive efficiency (L3).	15	<u>Analysis</u> of HOW characteristic(s) result(s) in a natural monopoly OR the consequences being developed = Level 3 <u>Identification AND explanation</u> of characteristic(s) = Level 2 <u>Identification</u> of characteristic(s) = Level 1	**Level 3: (9–15 marks)** For a clear analysis of the characteristics/features of a natural monopoly. 13–15: *Very good analysis*: good analysis of two or more characteristics/ features. 11–12: *Good analysis*: Good analysis of one characteristic/feature OR basic analysis of two characteristics/features. 9–10: *Basic analysis*: basic analysis of one characteristic/feature. **Level 2: (5–8 marks)** For an application of knowledge and understanding of the features of a natural monopoly. 7-8 marks: *Good application*: two or more factors identified and explained. 5-6 marks*: Basic application*: one factor identified and explained. Answers in this level will identify and explain characteristics/features but fail to analyse these in terms of why it gives rise to this market structure. In other words, such answers will <u>describe</u> the characteristic, rather than <u>analysing</u> it.

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Question			Answer	Marks	Guidance	
					Content	Levels of response
			Natural monopolies enjoy significant cost advantages over potential rivals (L1). For example, they enjoy much larger economies of scale (L2). This enables the natural monopolist to undercut any potential entrants in to the market and, hence, maintain its monopoly position (L3).			As soon as two or more characteristics/ features are identified and explained then 7-8 marks will be awarded. **Level 1: (1–4 marks)** For knowledge and understanding of what is a monopoly / natural monopoly. Answers in this level will provide a basic definition in terms of a situation where a monopolist has an overwhelming cost advantage. Simple definitions of monopoly will receive 1–2 marks, whilst answers which provide definitions of natural monopolies will gain 3–4 marks.

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Question			Answer	Marks	Guidance	
					Content	**Levels of response**
	(b)		**Discuss whether or not the provision of high quality service for consumers should be the aim of firms in transport markets.** Candidates are expected to analyse why high quality service may AND may not be the aim / objective of firms in the transport industry. To reach L4, analysis of BOTH sides is needed. **Relevant analysis of why high quality service would be the main objective includes:** • Firms which provide high quality service/a good quality product will gain more sales (L2). This can result in a higher level of demand which can be represented by a rightwards shift of the demand curve showing increased demand for a firm's product / or an increase in market share / modal shift (L3). • Accept relevant analysis of allocative efficiency which states that firms will aim to provide the quality that customers want in order to maximise consumer satisfaction (L2). Firms will provide a high quality service AND often provide services which are deemed to be socially desirable. In this way, demand and output can be raised as consumers will demand services which they see as more desirable (L3).	20	**Level 4(a): possible judgement includes:** The aim will vary from firm to firm. For example, before deregulation, some local authority bus companies aimed to provide the best quality service. It depends on the market structure in the industry. For example, a firm in a highly competitive market will have to profit maximise in order to survive (as this is where they make only 'normal' profits). Level 3: answers lacking relevant transport application will receive marks in the lower part of the band, eg 8 marks instead of 10 OR 5 marks instead of 7.	**Level 4(a): (16–20 marks)** For a discussion which includes a judgement as to whether or not providing a high quality service will always be the aim of firms in the transport industry. *NOTE: To reach L4(a) balanced discussion must already be present.* 18-20 marks: *Balanced discussion with good judgement*. 16-17 marks: *Balanced discussion with weak judgement*. **Level 4(b): (11–15 marks)** For a discussion of whether or not a high quality service is likely to be the aim of firms in the transport industry. Two-sided economic analysis. 13-15 marks: *Balanced discussion* with some transport application. 11-12 marks: *Basic discussion* (supporting analysis of one side is only basic) **Level 3: (5–10 marks)** One sided analysis of whether or not providing a high quality service will be the aim of firms.

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Question			Answer	Marks	Guidance	
					Content	Levels of response
			Possible analysis of why high quality service may not be the main objective include: • In non-competitive markets, firms will not necessarily need to provide the very best quality services (L2) as they will not face competition from other firms and therefore the need to do this (L3). • A strong brand can lead to complacency (L2) with an aim other than quality taking priority (L3). Alternative objectives may be more realistic such as: • Profit satisficing (firms may wish to avoid damaging price wars and, therefore, simply agree to accept a level of profit without maximising it) • In certain growing markets, firms may aim for sales revenue maximisation, achieved where firms produce where MR=0 (L2). This is because the firms may be keen to undercut rivals and offer a lower market price in order to gain market share from rivals (L3) • Profit maximisation will be achieved where MC=MR (L2). This is likely to be a much more realistic objective for firms in the private sector as they will want to maximise profits in order to satisfy shareholders (L3)		Level 2: answers in this level may simply recognise and describe different objectives of firms.	8-10 marks: *Good analysis*: one sided analysis which is good. 5-7 marks: *Basic analysis*: one sided analysis which is only basic in nature. **Level 2: (3–4 marks)** For application of knowledge and understanding of what high quality service involves <u>but lacking any relevant analysis</u> of why firms may want to do this. OR an answer which lists alternative objectives to high quality service. **Level 1: (1–2 marks)** For knowledge and understanding in terms of what high quality service is. *Quality of Written Communication* is assessed in this question. Please see page 5 for guidelines.

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Question			Answer	Marks	Guidance	
					Content	**Levels of response**
3	(a)		**Analyse economics and diseconomies of scale which arise in transport markets in the UK.** **Relevant examples of economies of scale (EOS) include:** • purchasing/commercial/bulk buying • technical • risk bearing • managerial • marketing • financial **Relevant <u>analysis</u> of these could include:** • Transport providers will be able to buy in bulk (L1); for example, fuel for aircraft. As such, they are likely to be able to negotiate larger discounts from suppliers (L2) which means that they will be able to benefit from lower LR average costs (L3) • As transport firms grow, they will benefit from financial EOS (L1). This is because banks will see them as less risky prospects and, hence, will be more willing to lend them money on better terms as there will be less risk involved (L2). As such, transport firms will be able to benefit from lower interest rates and hence will enjoy lower LR average costs (L3). **Relevant examples of diseconomies of scale (DOS) include:** • managerial/control issues • co-ordination	15	<u>Analysis</u> of WHY each named economy/dis-economy of scale results in lower/higher AC = Level 3 <u>Identification AND explanation</u> of relevant economies/ diseconomies = Level 2 <u>Identification</u> of relevant economies/ diseconomies = Level 1	**Level 3: (9–15 marks)** For a clear analysis of the possible economies/diseconomies of scale incurred by transport providers. 13–15: *Very good analysis*: good analysis of one economy of scale AND one diseconomy of scale. 11–12: *Good analysis*: Good analysis of one economy (or diseconomy) of scale OR basic analysis of two economies of scale or two diseconomies of scale or one of each. 9–10: *Basic analysis*: basic analysis of one economy OR one diseconomy of scale. **Level 2: (5–8 marks)** For an application of knowledge and understanding of different economies/ diseconomies of scale. 7-8 marks: *Good application*: one economy AND one diseconomy of scale identified and explained or identification and explanation of two economies of scale or two diseconomies of scale. 5-6 marks*: Basic application*: one relevant economy OR one diseconomy of scale identified and explained.

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Question			Answer	Marks	Guidance	
					Content	Levels of response
			• co-operation • increasing costs of raw materials **Relevant <u>analysis</u> of these could include:** • As firms expand they may well suffer from co-ordination problems (L1). If transport providers expand too rapidly then they may well find that it is more difficult to co-ordinate and control their workforce (L2). As such, transport providers may well see their levels of productivity fall (L2) and, as a result, firms may well incur higher LR average costs (L3). • Transport providers may well see the costs of their raw materials start to rise (L1). This is because firms may well start to demand such large volumes of raw materials that their higher demand begins to raise the market prices of such goods (L2). Hence, transport providers begin to suffer from increased LR average costs (L3).			Answers in Level 2 will identify and explain relevant economies OR diseconomies of scale but will not analyse these. In other words, such answers will describe the example rather than analysing it. **Level 1: (1–4 marks)** For knowledge and understanding of different economies/diseconomies of scale. Answers in this level will provide a basic definition of terms. Simple definitions of ONE of EOS/DOS will receive 1–2 marks, whilst answers which provide definitions of BOTH EOS and DOS will gain 3–4 marks. A lack of application to the transport market will force the mark to the bottom of the relevant level.

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Question			Answer	Marks	Guidance	
					Content	**Levels of response**
	(b)		**Discuss the extent to which the UK freight transport market is contestable.** Candidates will be expected to analyse why the UK freight transport market could be classed as being contestable and then analyse why it might not be. **Possible analysis of why it is contestable includes:** • legal barriers have been removed with privatisation. Firms are now free to bid for franchises when these become available • there are a large number of potential firms in the road freight/haulage market with firms facing relatively low barriers to entry • deregulation of the EU airline industry through the 'Open Skies' policy has provided 'open access' for firms fly freight transport anywhere within the UK. This has lowered barriers to entry in terms of air movement of freight **Possible analysis of why it is not contestable includes:** • there is imperfect information in the market and, hence, incumbent firms maintain an advantage over potential entrants • with rail freight, contestability is low as the main freight services were sold outright (initially to EWS and Freightliner). High barriers to entry remain in terms of rail freight • high start-up/set-up costs remain in this market (for example, meeting health and safety laws)	20	**Level 4(a): possible judgement includes:** The level of contestability depends on which aspect of the freight industry is being considered – rail, road or airline? The level of contestability will vary over time, depending on the size of incumbent firms. The extent to which the market is contestable depends on the extent to which barriers have to been reduced or still exist. The extent to which the market is contestable depends on the effectiveness of regulation / deregulation.	**Level 4(a): (16–20 marks)** For a discussion which includes a judgement as to how contestable the UK freight transport market is. NOTE: To reach L4(a) balanced discussion must already be present. 18-20 marks: *Balanced discussion with good judgement*. 16-17 marks: *Balanced discussion with weak judgement*. **Level 4(b): (11–15 marks)** For a discussion of how contestable the UK transport market is. Two-sided economic analysis. 13-15 marks: *Balanced discussion* with some transport application. 11-12 marks: *Basic discussion* (supporting analysis of one side is only basic). **Level 3: (5–10 marks)** One sided analysis. In other words, analyses EITHER that the UK freight transport market is contestable OR it is not contestable. 8-10 marks: *Good analysis*: one sided analysis which is good.

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Question			Answer	Marks	Guidance	
					Content	Levels of response
			• existing firms can benefit from substantial economies of scale in comparison to potential new entrants • possible predatory pricing may occur which will deter potential entrants from joining the market			5-7 marks: *Basic analysis*: one sided analysis which is only basic in nature. (Answers which lack application to the UK freight transport market will be at the bottom of the band, ie either 5 or 8 marks) **Level 2: (3–4 marks)** For an application of knowledge and understanding of what barriers to entry may exist but lacking analysis of why this alters the level of contestability. **Level 1: (1–2 marks)** For knowledge and understanding of what a contestable market is. *Quality of Written Communication* is assessed in this question. Please see page 5 for guidelines.

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Question			Answer	Marks	Guidance	
					Content	Levels of response
4	(a)		**Other than Gross Domestic Product data, analyse the factors economists would consider when forecasting the demand for bus usage in the UK.** **Factors considered when making forecasts include:** • fuel prices • population growth • car ownership • employment • price of substitutes • age distribution • government policy • level of congestion • quality of bus provision (technology) • price of bus journeys • accept any other reasonable qualifying factor **Relevant <u>analysis</u> of these could include:** Fuel prices are used (L1). As fuel prices rise, fewer people will be able to afford to drive, so less car journeys are made (L2). As a result, there will be a contraction of demand for car use (basic L3) or a forecast shift to a cheaper substitute/modal switch (good L3). Employment (L1). Higher employment will mean more work related transport journeys are required (L2). Hence higher forecast 'derived' demand for a modal switch of transport usage (good L3).	15	<u>Analysis</u> of each reason (ie clear analysis of how the factor may be used in forecasting) = Level 3 <u>Identification AND explanation</u> of reasons = Level 2 <u>Identification</u> of possible reasons = Level 1 DO NOT reward reference to GDP.	**Level 3: (9–15 marks)** For clear analysis of the different factors used in forecasting. 13–15: *Very good analysis*: good analysis of two or more factors used in forecasting. 11–12: *Good analysis*: Good analysis of one factor OR basic analysis of two factors. 9–10: *Basic analysis*: basic analysis of one factor used in forecasting. **Level 2: (5–8 marks)** For an application of knowledge and understanding of the factors used in forecasting. 7-8 marks: *Good application*: Two or more relevant factors are identified and explained. 5-6 marks: *Basic application*: One relevant factor identified and explained. Answers in this level will identify and explain relevant factors but fail to analyse these in terms of how they are used in making forecasts.

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Question			Answer	Marks	Guidance	
					Content	Levels of response
						As soon as two or more factors are identified and explained then 7-8 marks will be awarded. **Level 1: (1–4 marks)** For knowledge and understanding of the factors used in forecasting. One factor correctly identified will receive 1–2 marks, whilst answers which provide several relevant examples of the factors included in forecasting will gain 3–4 marks.

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Question			Answer	Marks	Guidance	
					Content	**Levels of response**
	(b)		**Discuss the effectiveness of regulation and subsidies as policies to encourage more people to travel on public transport.** Candidates will be expected analyse how effective BOTH subsidies and regulation are AND then analyse the possible limitations of these policies before offering a clear judgement. **Possible analysis of subsidies include:** An **explained** diagram. Diagram must clearly show the supply curve shifting to the right AND must include fully labelled equilibrium points which must be explained. Written analysis in terms of BOTH: 1. subsidies have the effect of lowering costs of production for firms providing public transport and, hence, encourage greater supply / modal switch (explicitly stating the modes) 2. this lowers equilibrium price AND encourages increased quantity/consumption **Possible analysis of regulation includes:** An explained diagram. Diagram may take the form of a perfectly vertical/inelastic supply curve at the regulated level of output OR a leftwards shift of the supply curve for cars as long as this is explained with reference to increased costs of production (perhaps due to health and safety regulations). Written analysis in terms of: Regulation in the form of laws/rules which are backed up by fines in order to provide individuals with very clear incentives to changes their	20	**Level 4(a): possible judgement includes:** It depends on exactly WHAT is being subsidised and regulated, ie is it a capital or fare subsidy? It is likely to be more effective if combined with other policies as part of a wider, integrated solution. Its effectiveness depends on the levels of subsidy and regulation used and for how long the policies remain in place.	**Level 4(a): (16–20 marks)** For a discussion which includes a judgement as to how effective subsidies and regulation are in encouraging greater use of public transport. NOTE: To reach L4(a) balanced discussion must already be present. 18-20 marks: *Balanced discussion with good judgement*. 16-17 marks*: Balanced discussion with weak judgement*. **Level 4(b): (11–15 marks)** For a discussion of the extent to which regulation and subsidies will be effective. Two-sided economic analysis. 13-15 marks: *Balanced discussion* with some transport application - BOTH policies must be analysed in terms of how they work. 11-12 marks: *Basic discussion* (supporting analysis of one side is only basic) **Level 3: (5–10 marks)** One sided analysis. In other words, analyses EITHER how regulation and subsidies will work OR will not work.

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Question			Answer	Marks	Guidance	
					Content	Levels of response
			behaviour as otherwise they will end up being prosecuted. Hence, regulation provides an incentive for people to change their actions. **Possible analysis of why subsidies may not be effective includes:** • if PED is inelastic then a subsidy will have little effect on equilibrium quantity • the subsidy may not be used to lower prices/ increase capital investment and may simply be used to increase the firm's profits. Hence, the government needs to check exactly how it is used • how big should the subsidy be? Ideally it should be equal to external benefit but how can this be measured? • the cost to the government (and associated opportunity cost) • if YED is negative then any subsidy will be relatively ineffective during a time of rising incomes as people will be shifting away from buses to other modes of transport **Possible analysis of why regulation may not be effective includes:** • the cost of enforcing the regulation may well be excessive and, as such, may negate the benefits • regulation may be set at the wrong level • regulation to encourage lower car use such as increased use of parking permits, low emission zones and increasing environmental standards may be accepted by motorists unless they are sufficiently severe to encourage/incentivise people to change their behaviour			8-10 marks: *Good analysis*: one sided analysis of BOTH policies. 5-7 marks: *Basic analysis*: one sided analysis of ONE policy only. (Answers which lack transport application will be at the bottom of the band ie either 5 or 8 marks) **Level 2: (3–4 marks)** For an application of knowledge and understanding of what regulation and subsidies are and what impact they have (eg "subsidies lower price"). Application of knowledge and understanding of BOTH regulation and subsidies = 4 marks. If only one covered, then award three marks. **Level 1: (1 – 2 marks)** For knowledge and understanding of what regulation/subsidies are. *Quality of Written Communication* is assessed in this question. Please see page 5 for guidelines.

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Tuesday 10 June 2014 – Afternoon

A2 GCE ECONOMICS

F584/01 Transport Economics

Candidates answer on the Question Paper.

OCR supplied materials:
None

Other materials required:
- Calculators may be used

Duration: 2 hours

Candidate forename		Candidate surname	

Centre number						Candidate number				

INSTRUCTIONS TO CANDIDATES

- Write your name, centre number and candidate number in the boxes above. Please write clearly and in capital letters.
- Use black ink. HB pencil may be used for graphs and diagrams only.
- Answer Section A and **one** question from Section B.
- Read each question carefully. Make sure you know what you have to do before starting your answer.
- Write your answer to each question in the space provided. If additional space is required, you should use the lined pages at the end of the booklet. The question number(s) must be clearly shown.
- Do **not** write in the bar codes.

INFORMATION FOR CANDIDATES

- The number of marks is given in brackets **[ ]** at the end of each question or part question.
- The total number of marks for this paper is **60**.
- The quality of your written communication will be taken into account in the marking of your answer to Section B.
- This document consists of **20** pages. Any blank pages are indicated.

A calculator may be used for this paper

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Public and private sector investment in roads in Britain

Over the past 50 years there has been considerable growth in the road network in Britain, as shown in Fig. 1. During this time the vast majority of roads have been built and maintained by the public sector, with only a tiny number of private sector road projects being undertaken, such as the M6 Toll road.

Year	Motorways	A roads	Minor roads
1960	153	45 192	267 158
1970	1057	45 990	275 437
1980	2556	46 580	290 497
1990	3070	47 823	307 142
2000	3467	46 607	340 163
2010	3558	46 707	343 989

Fig. 1 – Road lengths by road type in Britain (kilometres)

The government has indicated that it would like the private sector to take on a greater role in funding the expansion and running of the road network in Britain, as shown in the following article. This suggestion has led to much debate about whether the public or the private sector should finance this vital part of the nation's infrastructure.

'The Open Road'

In early 2012 the Prime Minister, David Cameron, gave a speech encouraging "large scale private investment" to upgrade the country's road and motorway network. Mr Cameron's speech focused on the long-standing problem of how to fund infrastructure. Whilst Britain's transport network is relatively good, congestion is a daily problem in some places and maintenance work is needed elsewhere to upgrade roads in order to improve their use.

Chosen well, investment to address the problem of 'pinch-points' (areas where traffic congestion is very bad) is one of the most cost-effective types of transport spending there is in Britain, as Sir Rod Eddington noted in his 2006 report. Some economists note that although improving roads is neither exciting nor glamorous cost-benefit analysis favours these schemes more highly than national projects such as high speed rail links.

The issue for the Prime Minister is where to get the money from for funding road infrastructure projects. In 2010 the coalition government clearly ruled out road pricing on existing roads, although it has since said that it would consider tolls on new roads.

The bigger issue which the Department of Transport has now been asked to consider is whether roads can be leased to private companies to encourage investment in them. In such cases, motorists would still not directly pay for using the roads but private companies would receive a payment from central government according to the number of drivers using the road. These payments would be funded from the annual £6 billion revenue from Vehicle Excise Duty (VED).

Such a proposal would be a huge change in road funding in Britain. It would raise the debate about whether or not the principle of hypothecation of tax revenue should be applied to transport in Britain.

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SECTION A

Answer **all** parts of the question in this section.

1 **(a)** **(i)** Using Fig. 1, identify which decade saw the largest percentage increase in Britain's motorway network.

..... **[1]**

(ii) State and explain **one** external benefit of expanding Britain's motorway network.

.....

.....

.....

..... **[2]**

(b) Lines 17–18 state that 'cost-benefit analysis favours these schemes (to improve roads) more highly than national projects such as high speed rail links'.

(i) What does this statement mean?

..... **[1]**

(ii) State and explain **two** problems of using cost-benefit analysis when deciding whether or not to build a new road.

1 .....

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2 .....

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[4]

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(iii) Explain **one** difference between the approaches of the public and private sectors to decision making about major infrastructure investment projects.

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..... **[3]**

(c) What is meant by the 'hypothecation of tax revenue' (line 28)?

.....

..... **[1]**

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(d) 'In 2010 the coalition government clearly ruled out road pricing on existing roads, although it has since said that it would consider tolls on new roads' (lines 20–21).

Comment on the effectiveness of tolls on new roads (road user charging) in reducing market failure.

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..... **[5]**

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(e) Discuss whether increasing the role of the private sector will be beneficial to the road transport market. **[8]**

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SECTION B

Answer **one** question from this section.

2 **(a)** Analyse the level of economic efficiency achieved in the short run in a monopolistically competitive transport market. **[15]**

(b) Discuss the impact of a fall in market concentration on the economic efficiency of a transport market of your choice. **[20]**

3 **(a)** Analyse negative externalities arising in transport markets. **[15]**

(b) Discuss the effectiveness of using forecasts of transport trends to meet the future needs and requirements of transport markets. **[20]**

4 **(a)** Analyse barriers to entry in the UK air transport market. **[15]**

(b) Discuss whether the UK government should raise indirect taxes, such as Air Passenger Duty, on air travel in order to increase sustainability. **[20]**

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SECTION B

Question No. .....

Start your answer to part **(a)** here

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Start your answer to part **(b)** here

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END OF QUESTION PAPER

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ADDITIONAL ANSWER SPACE

If additional answer space is required, you should use the following lined page(s). The question number(s) must be clearly shown in the margins.

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GCE

Economics

Unit **F584:** Transport Economics

Advanced GCE

Mark Scheme for June 2014

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This mark scheme is published as an aid to teachers and students, to indicate the requirements of the examination. It shows the basis on which marks were awarded by examiners. It does not indicate the details of the discussions which took place at an examiners' meeting before marking commenced.

All examiners are instructed that alternative correct answers and unexpected approaches in candidates' scripts must be given marks that fairly reflect the relevant knowledge and skills demonstrated.

Mark schemes should be read in conjunction with the published question papers and the report on the examination.

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Annotations

Please annotate **every** response, even if no credit is given.

Annotation	Meaning
BP	Blank Page – this annotation **must** be used on all blank pages within an answer booklet (structured or unstructured) and on each page of an additional object where there is no candidate response.
	Tick
	Cross
	Unclear
BOD	Benefit of doubt
EE	Effective evaluation
IR	Irrelevant
L1	Level 1
L2	Level 2
L3	Level 3
L4	Level 4
NAQ	Not answered question
SEEN	Noted but no credit given
TV	Too vague
	Development of point

Highlighting is also available to highlight any particular points on the script.
'**SEEN**' to be inserted on <u>every</u> blank page

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Subject-specific Marking Instructions

Some questions may have a 'Level of Response' mark scheme.

The following guidelines on the **quality of written communication** are embedded into the Levels of Response mark scheme used for part (b) of the essays and should be applied consistently between the different essays:

Level 4: Complex ideas have been expressed clearly and fluently using a style of writing which is appropriate to the complex subject matter. Sentences and paragraphs, consistently relevant, have been well structured, using appropriate technical terminology. There may be few, if any, errors of spelling, punctuation and grammar.

Level 3: Relatively straightforward ideas have been expressed with some clarity and fluency. Arguments are generally relevant, though may stray from the point of the question. There will be some errors of spelling, punctuation and grammar, but these are unlikely to be intrusive or obscure meaning.

Level 2: Some simple ideas have been expressed in an appropriate context. There are likely to be some errors of spelling, punctuation and grammar of which some may be noticeable and intrusive.

Level 1: Some simple ideas have been expressed. There will be some errors of spelling, punctuation and grammar.

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Question			Answer	Marks	Guidance
1	(a)	(i)	**Using Fig. 1, identify which decade saw the largest percentage increase in Britain's motorway network.** 1960s 1960-70	1	For one mark. Do **not** accept 1960 or 1970 **Annotation :** **Tick or Cross**
		(ii)	**State and explain one external benefit of expanding Britain's motorway network.** Indicative content: Possible external benefits of expanding the motorway network include: • increased employment in the local area. • local multiplier effects • increased FDI • increased trade to local businesses Exemplar response: Local businesses will benefit (1) from increased trade (1) OR as they have had nothing to do with the decision to build the motorway (1) Reduced congestion (0) means there is less pollution for local residents (2) Do not award reduced congestion, reduced pollution, and reduced time loss without reference to a third party. The above answer would be zero without the reference to local residents. The third party is not the motorist.	2	One mark for a correct identification and one mark for an explanation of an external benefit. NOTE: this is a (1+1) question. Candidate must make reference to third party or provide an example of a third party e.g. firms, the economy, the area, NHS etc. to assess any marks Development/explanation can be either in terms of why it is an external benefit or what causes the external benefit. **Annotation:** **Tick per mark**
	(b)	(i)	**Lines 17-18 state that 'cost-benefit analysis favours these schemes (to improve roads) more highly than national projects such as high speed rail links'. What does this statement mean?** For a clear recognition that the net social benefit figure / NPV/CBA ratio/rate of return/net benefit to society resulting from a cost-benefit analysis would **be higher/greater** for local road projects than it would be for national, high profile projects, such as high-speed rail.	1	For one mark. Do **not** accept higher benefit/positive result **Annotation:** **Tick or Cross or TV**

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Question			Answer	Marks	Guidance
		(ii)	**State and explain two problems of using cost-benefit analysis when deciding whether or not to build a new road.** Indicative content: • difficulty in assigning monetary values • what costs/benefits to include • how to value future costs/benefits (accept what discount rate should be applied) • the time/cost of undertaking the CBA • possible subjectivity in the process • what weightings should be attached to different costs and benefits • difficulties in forecasting future benefits Exemplar responses: 'One problem will be attaching accurate monetary values to costs/benefits (1). This is because there are many of the issues non-monetary issues such as environmental damage/pollution/destruction of the green belt, etc. which are intangible (1).' 'A further problem is the cost of undertaking cost-benefit analysis (1). Surveys need to be undertaken and investigations take time and also incur expense. As a result, cost-benefit analysis can be very expensive to undertake (1).'	4	One mark for each correct identification up to a maximum of two identifications, plus a further one mark for each of two explanations. NOTE: this is a (1+1) x 2 question. Do **not** accept repetition for the second identification Watch out for answers which have more than 2 identification points. To get the second mark here, more detailed explanation needed than simply stating for example that 'it is inaccurate' or 'leads to a wrong decision'. Do **not** accept simple terms such as 'factors' need explicit reference to cost and/or benefits or types of costs and benefits **Annotation:** **Tick per mark**

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Question			Answer	Marks	Guidance
		(iii)	**Explain one difference between the approaches of the public and private sectors to decision making about major infrastructure investment projects.** Indicative content: One mark for a correctly identifying the main difference e.g. profit motivation/commercial return for private sector or quality of provision/social benefit for public sector. Up to two further marks for developing this and drawing out the contrast between the two approaches. Exemplar responses: A private sector approach would be more profit orientated (1). Private sector firms will want to maximise profits in order to satisfy shareholders (1), while the government will, in theory, be more concerned about service quality and improving transport services (1). A public sector approach could be to improve service provision (1) as this would increase allocative efficiency (1) while the private sector may only be concerned with profit (1) OR sales maximisation (1) etc.	3	Up to three marks, but for full marks there needs to be clear contrast between the aims of public and private sector decision making processes. **Annotation: tick per mark**
	(c)		**What is meant by the 'hypothecation of tax revenue' (line 28)?** Exemplar response: Hypothecation involves government tax revenues being spent/re-invested on some other purpose/specific area or being 'ring-fenced'. Accept tax revenue spent on the same area in which it was raised.	1	Accept "a situation where revenue from a tax is directly allocated to another purpose". Accept a relevant example, e.g. VED revenue being spent on road maintenance and building projects. **Annotation:** **Tick or cross or TV**

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Question	Answer	Marks	Guidance
(d)	**Comment on the effectiveness of tolls on new roads (road user charging) in reducing market failure.** <u>Two marks are available for analysis of how tolls on new roads (road user charging) would work:</u> For the first mark: • road user charging makes road users take into account the full social costs of their actions • road users are made to pay a charge which equals the external costs of their actions • by charging consumers they will internalise the externality • private costs increase (1) Accept relevant diagrams for this mark: e.g. correct leftwards shift of the supply curve and new and old equilibriums, indicating higher price and lower equilibrium quantity. For second mark must make explicit reference • to reducing overconsumption • achieving allocative efficiency • reduce welfare loss <u>Up to three marks are available for evaluation</u>: • PED: if inelastic, then there will be little change in congestion • size of charge: too low and it will be less effective • need for an alternative to be in place, i.e. substitute to cars • regressive nature: road pricing has a greater impact on low income groups • possible displacement: road pricing is only effective if introduced on every road. Otherwise, drivers switch to free roads. • Difficult to set correct value of toll (road user charge) <u>Alternatively one mark is available for a clear conclusion/judgement</u> as to whether or not road pricing is effective	5	Up to five marks: NOTE: this is a 2+2+1 OR 2+3 question. **Needs analysis of how road user charging would work before credit can be given for problems of road user charging** One point of criticism which is clearly developed can gain two marks. **Annotation:** **Ticks per point of analysis (max 2)** **L4 per evaluative point or development (max 3)**

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Question	Answer	Marks	Guidance
(e)	**Discuss whether increasing the role of the private sector will be beneficial to the road transport market.** <u>Up to three marks are available for relevant analysis of the benefits of increasing the role of the private sector</u>: • increased competition (accept reference to firms competing for franchises OR simply more firms competing against each other on transport routes) • accept development of increased competition in terms of lower prices OR increased innovation OR increased productive/allocative/dynamic efficiency or reduced X-inefficiency. • reduced cost to the taxpayer (no longer supporting public sector/ nationalised services) • possible revenues gained by the government through the privatisation process. • Increased investment/greater access to finance • Improved management/expertise <u>A further three marks are available for discussion of possible drawbacks including</u>: • increasing the role of the private sector has not necessarily increased competition. Hence oligopoly/duopoly or even a private sector monopoly may result which is arguably worse than a public sector monopoly. • possible loss of economies of scale/natural monopoly: a larger number of competing firms may well result in each firm incurring higher ACs – hence private firms may be productively inefficient. • private sector firms may well be more concerned with maximising profits than providing a high quality service (possible allocative inefficiency?). • private sector firms may well ignore external costs and hence market failure may result from increased negative externalities. • the private sector may well involve duplication of existing services – hence allocative inefficiency. • Goes against concept of an integrated transport policy	8	Up to eight marks: This is a 3+3+2 question. The final two marks are only available if a two sided analysis is provided. Accept analysis on both sides if reference is made to PPP/PFI Accept reference to concept of roads as public/quasi-public goods as evaluation Do not allow arguments specifically referring to transport markets other than road Any one point of analysis or counter-analysis which is clearly developed can gain up to three marks maximum. Alternatively, the identification of three separate but relevant points of analysis or counter-analysis can also gain all three analysis marks. **Tick per point of analysis (max 3)** **L4 per point counter-analysis (max 3)** **EE for judgement or developed statement (max 2)**

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Question			Answer	Marks	Guidance
			A further two marks are available for a conclusion/judgement. These marks are awarded as follows: One mark for a simple statement – for example: • "increasing the private sector has been beneficial". • "overall, increasing the size of the private sector has not been beneficial" Two marks for a developed statement – for example: • increasing the role of the private sector may well be beneficial as long as significant economies of scale are not lost by road transport firms • increasing the role of the private sector, overall, may well be beneficial BUT this depends upon how big the scale/size of increase in there is/how much the private sector grows by.		

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Question			Answer	Marks	Guidance	
					Content	**Levels of response**
2	(a)		**Analyse the level of economic efficiency achieved in the short run in a monopolistically competitive transport market.** Candidates need to analyse why SR monopolistic competition is inefficient/efficient. **Relevant <u>analysis</u> of types of economic inefficiency could include:** Allocative inefficiency arises (L1). This is usually achieved where P=MC (L2) but in the case of monopolistic competition this is NOT achieved (basic L3). If illustrated with a diagram, with explicit written reference to production not being where P=MC, then this achieves (good L3). (diagram only L2). Productive inefficiency arises (L1). This is usually achieved where production takes place at minimum AC (L2) OR where as few scarce resources are used in production as is possible (L2). In SR monopolistic competition, this is not achieved basic L3). If illustrated with correct SR diagram, with explicit written reference to not producing at minimum AC this achieves 'good' analysis. (diagram only L2) Accept reference to dynamic efficiency being improved (L1) if SR abnormal is invested (L2) to satisfy more consumer wants (L3) OR being alternatively dynamic inefficient (L1) due to lack of incentive to invest/innovate (L2) as profits will be competed away (L2) therefore consumer satisfaction not maximised (L3).	15	<u>Analysis</u> of WHY monopolistic competition is economically inefficient = Level 3 <u>Identification AND explanation</u> of inefficiency = Level 2 <u>Identification</u> of type of inefficiency or characteristics of types efficiency and/or monopolistic competition = Level 1 **Annotation:** **Use L1, L2 or L3 where this has been awarded**	**Level 3: (9–15 marks)** For a clear analysis of why monopolistic competition is inefficient. 13–15: *Very good analysis*: good analysis of two types of efficiency/inefficiency. 11–12: *Good analysis*: Good analysis of one types of efficiency/inefficiency OR basic analysis of two types. 9–10: *Basic analysis*: basic analysis of one type of efficiency/ inefficiency. **Level 2: (5–8 marks)** For an application of knowledge and understanding of the circumstances under which allocative and/or productive inefficiency arise. 7-8 marks: *Good application*: Two types of economic efficiency identified and explained. 5-6 marks*: Basic application*: 1 type of economic efficiency identified and explained. Answers in this level will identify and explain different types of economic efficiency only. In other words, such answers will describe the conditions under which economic efficiency/ inefficiency are achieved rather than analysing it.

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Question			Answer	Marks	Guidance	
					Content	Levels of response
						As soon as both types of economic efficiency are identified and explained then 7-8 marks will be rewarded. **Level 1: (1–4 marks)** For knowledge and understanding of type of ineffiency OR what economic efficiency or monopolistic competition is. Answers in this level will provide a basic definition of terms Simple definitions of ONE type of efficiency will receive 1–2 marks whilst answers which provide definitions of two types of efficiency will gain 3–4 marks.

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Question			Answer	Marks	Guidance	
					Content	**Levels of response**
	(b)		**Discuss the impact of a fall in market concentration on the economic efficiency of a transport market of your choice.** Candidates are expected to analyse how a fall in market concentration may increase AND decrease economic efficiency. To reach Level 4, analysis of BOTH sides is needed. Candidates clearly should recognise that a fall in market concentration indicates that the market has become more competitive. MAXIMUM 15 for candidates failing to recognise this but economic analysis regarding competition/lack of competition is correct. **<u>Possible analysis of why a fall in market concentration does lead to economic efficiency includes:</u>** **Diagrams:** Accept theory of the firm diagrams showing a move AWAY from monopoly towards a more competitive market (perfectly competitive market). For L3 diagrams need developing in terms of EITHER: • greater competition leads to lower ACs and, therefore, productive efficiency. • competition leads to lower prices and, hence, allocative efficiency. **Written analysis in terms of:** Increased productive efficiency may occur (L2) as firms want to produce at lowest AC in order to lower their prices (L3)	20	**Level 4(a): possible judgement includes:** The <u>size</u> of the fall in market concentration is important. It depends on the nature of the industry in question. For example, with higher levels of fixed costs, a fall in concentration may mean many smaller firms unable to exploit economies of scale – hence, inefficient. It is not the level of competition that is important in determining economic efficiency but the level of contestability. The impact on economic efficiency depends the role and quality of regulation **Annotation:** **Use L1, L2, L3, L4 and EE (judgement to note L4a) where this is achieved.**	**Level 4(a): (16–20 marks)** For a discussion which includes a judgement as to whether or not a fall in market concentration will increase or decrease economic efficiency. ***NOTE: To reach L4 (a) balanced discussion must already be present.*** 18-20 marks: *Balanced discussion with good judgement*. 16-17 marks: *Balanced discussion with weak judgement*. **Level 4(b): (11–15 marks)** For discussion of the impact of a fall in market concentration on economic efficiency. 13-15 marks: *Balanced discussion* i.e. good analysis on both sides 11-12 marks: *Basic discussion* (analysis of one side is only basic) **Level 3: (5–10 marks)** One sided analysis of the impact of a fall in market concentration. Accept relevant theory of the firm diagrams. 8-10 marks: *Good analysis*: one sided analysis which is good. 5-7 marks: *Basic analysis*: one sided analysis which is only basic in nature.

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Question			Answer	Marks	Guidance	
					Content	**Levels of response**
			Increased allocative efficiency (L2) as firms want to sell at a price equal to MC (L3) OR firms want to sell exactly those goods and services which consumers demand in order to remain in business (L3). Reduced X-inefficiency (L2) as firms have to reduce costs to enable them to sell their products at the lowest possible prices. (L3). Increase consumer surplus (L2) as consumers benefit from lower prices due to increased supply (L3) increasing consumer welfare (L3) **Possible analysis of why a fall in market concentration may not increase economic efficiency includes:** Loss of economies of scale (L2). In markets where significant economies of scale exist then small firms will be unable to exploit the benefits of these and, hence, productive inefficiency results as firms produce at higher ACs (L3). Loss of natural monopoly(L2) resulting in loss of allocative or productive efficiency due to breaking up large scale production and benefits of EOS (L3) A fall in market concentration may result in firms trying to cut costs in order to compete – hence, possible rise in negative externalities (L2) and allocative inefficiency (L3). Possible loss of dynamic efficiency (L2). Smaller, competitive firms may well make smaller profits and, hence, have less to invest in research and development: hence, in LR there may be greater inefficiency. (L3).		Level 3: answers lacking relevant transport application will receive marks in the lower part of the band e.g. 8 marks instead of 10 OR 5 marks instead of 7. Level 2: answers in this level may simply recognise that a fall in market concentration will increase productive efficiency but fail to analyse why this is so.	**Level 2: (3–4 marks)** For an application of knowledge and understanding of the impact of a fall in market concentration <u>but lacking any relevant analysis</u>. **Level 1: (1–2 marks)** For knowledge and understanding of what market concentration OR economic efficiency are. *Quality of Written Communication* is assessed in this question. Please see page 5 for guidelines.

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Question			Answer	Marks	Guidance	
					Content	**Levels of response**
3	(a)		**Analyse negative externalities arising in transport markets.** **Relevant negative externalities include:** • congestion/time delays • noise • increased pollution • increased accidents • blight • visual intrusion (accept any negative externalities associated with increased infrastructure to cope with increased traffic). **Relevant <u>analysis</u> of these could include:** Congestion (L1) results from transport markets as, with more and more vehicles on roads, journeys become slower (L2). This imposes a cost on other drivers who are already on roads OR to businesses which now are unable to deliver products on time, i.e. costs to third parties (L3). Noise pollution (L1) is imposed on those who live near to motorways and other transport infrastructure (L2) and represents a negative externality as these people had no role in the decision being taken and, hence, are innocent third parties (L3). Pollution (L1) has increased with the growth of transport markets, e.g. emissions from vehicles and airplanes (L2). This is imposed on those who live near motorways/airports and, therefore, represents a cost imposed upon an innocent third party (L3).	15	<u>Analysis</u> of WHY each factor is a negative externality (i.e. why there is a negative impact upon a third party) = Level 3 <u>Identification AND explanation</u> of externalities = Level 2 <u>Identification</u> of externalities = Level 1 **Annotation:** **Use L1, L2 or L3 where this has been awarded**	**Level 3: (9–15 marks)** For a clear analysis of the negative externalities arising from transport markets. 13 – 15: *Very good analysis*: good analysis of two or more negative externalities. 11 – 12: *Good analysis*: Good analysis of one negative externality OR basic analysis of two. 9 – 10: *Basic analysis*: basic analysis of one negative externality. **Level 2: (5–8 marks)** For an application of knowledge and understanding of the negative externalities arising from transport markets. 7-8 marks: *Good application*: 2 or more relevant externalities identified and explained. 5-6 marks*: Basic application*: 1 relevant externality identified and explained. Answers in this level will identify and explain relevant externalities but fail to analyse these in terms of why they are costs imposed upon third parties. In other words, such answers will describe the externality rather than analysing it.

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Question			Answer	Marks	Guidance	
					Content	Levels of response
			Alternatively accept analysis of how negative externalities result in market failure External costs ignored OR full social costs not met (L1) Therefore under-priced and/or overconsumed (L2) And hence allocative inefficiency OR too many scarce resources used (L3) Accurate diagram (L2) – needs written comparison between allocative efficiency and market equilibrium for L3.			As soon as two or more externalities are identified and explained then 7-8 marks will be rewarded. **Level 1: (1–4 marks)** For knowledge and understanding of what negative externalities are. Answers in this level will provide a basic definition in terms of SC>PC or a cost to a third party. Simple definitions will receive 1–2 marks whilst answers which provide definitions and simple examples will gain 3–4 marks.

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Question			Answer	Marks	Guidance	
					Content	**Levels of response**
	(b)		**Discuss the effectiveness of using forecasts of transport trends to meet the future needs and requirements of transport markets.** Candidates will be expected to analyse the methods or usefulness of forecasting to meet future needs and requirements and then analyse the limitations of these. **Analysis of why forecasting is useful OR analysis of different methods of forecasting future trends include:** • helps government make policy/resource allocation decisions (L2) improving allocative efficiency/best use of scarce resources (L3) • helps government make budgetary decisions (L2) by identifying projects with highest NPV (L3) • an important part of CBA (L2) enabling best use of scarce resources (L3) • helps government work towards a sustainable transport policy (L2) enabling better allocation of future resources • the government will use GDP data (L2) in order to forecast future demand for transport needs. This is because higher levels of GDP/ household income can be expected to lead to increased demand for goods and services (with transport being a derived demand) (L3). With higher incomes, people will buy more goods and services and, hence, more goods and services will need to be transported and delivered (L3).	20	**Level 4(a): possible judgement includes:** Whilst there are flaws with transport forecasting, this process is still incredibly important and therefore even if data is incorrect, it is better to have some data rather than none to base infrastructure planning on **Annotation:** **Use L1, L2, L3, L4 and EE (judgement to note L4a) where this is achieved**	**Level 4(a): (16–20 marks)** For a discussion which includes a judgement as to the effectiveness of transport forecasting as a method of meeting future needs and requirements in transport markets. **NOTE: To reach L4 (a) balanced discussion must already be present.** 18-20 marks: *Balanced discussion with good judgement*. 16-17 marks: *Balanced discussion with weak judgement*. **Level 4(b): (11–15 marks)** For discussion of the effectiveness of transport forecasting as a method of meeting future needs and requirements in transport markets. 13-15 marks: *Balanced discussion* i.e. good analysis on both sides 11-12 marks: *Basic discussion* (analysis of one side is only basic). **Level 3: (5–10 marks)** One sided analysis. In other words, analyses EITHER how different factors are used in order to establish forecasts OR the limitations of such factors. 8-10 marks: *Good analysis*: one sided analysis which is good.

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Question			Answer	Marks	Guidance	
					Content	Levels of response
			• future transport needs and wants will also be forecasted using fuel prices (L2). Higher fuel prices may well mean that people look to public transport alternatives to car use and, therefore, switch to the cheaper public transport substitute, away from car use, thus reducing the demand for road use (L3). • population growth will also be taken into account when deriving forecasts (L2). This is because, with increased population, there will be greater demand for goods and services/greater use of vehicles to commute to work and, hence, the derived demand for transport will increase (L3). **Possible analysis of the problems of using such methods can take the form of EITHER analysing the flaws of using specific data OR the consequences of using flawed data. For example:** Much of the data used is volatile and, therefore, unpredictable (L2). As a result, if incorrect data is used to put into the forecasts, then incorrect data will be gained from it (L3). Forecasting future data involves considerable uncertainty (L2) and, therefore, estimated levels of GDP/population growth/fuel prices may all be wrong. As a result, incorrect forecasts may be made and the wrong infrastructure provided (L3). If incorrect forecasts are made then the wrong infrastructure will be built (L2). This means that the future needs and requirements of both consumers and businesses will not be met (L3).			5-7 marks: *Basic analysis*: one sided analysis which is only basic in nature. (Answers which lack transport application will be at the bottom of the band i.e. either 5 or 8 marks) **Level 2: (3–4 marks)** For an application of knowledge and understanding of which different factors are used in deriving forecasts of future transport demand e.g. 'predict and provide' **Level 1: (1–2 marks)** For knowledge and understanding of what forecasting is. *Quality of Written Communication* is assessed in this question. Please see page 5 for guidelines.

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Question			Answer	Marks	Guidance	
					Content	Levels of response
4	(a)		**Analyse barriers to entry in the UK air transport market.** **Relevant barriers to entry include:** • high set up costs (e.g. leasing of aircraft) • limited flight slots at airports (particularly at Heathrow) • brand loyalty of existing companies • sunk costs of entering the market (e.g. high advertising costs) • legal/health and safety barriers • economies of scale enjoyed by existing firms • possible limit pricing/predatory pricing of existing firms. **Relevant <u>analysis</u> of these could include:** High set up costs exist on entering the market (L1). For example, firms may incur significant costs from leasing aircraft which could well be substantial (L2). These costs will deter firms from entering the market as they simply may not have the funds to lease the aircraft (L3). Limited landing slots (L1) exist at certain airports; for example, Heathrow and Gatwick (L2). Hence, if firms are unable to access these landing slots then they will be unable to provide a service and will not enter the market (L3). Existing firms may enjoy large economies of scale (L1). For example, bulk buying of fuel or managerial economies, being able to employ specialist managers (L2). These firms will enjoy	15	<u>Analysis</u> of WHY each factor is a barrier to entry (i.e. HOW each factor stops a firm entering the market) = Level 3 <u>Identification AND explanation</u> of barriers in the context of the UK air passenger market = Level 2 <u>Identification</u> of possible barriers = Level 1 If not applied to air passenger market then give mark at the lower end of the band **Annotation:** **Use L1, L2 or L3 where this has been awarded**	**Level 3: (9–15 marks)** For clear analysis of the different barriers to entry in the air passenger market in the UK. 13 – 15: *Very good analysis*: good analysis of two or more barriers to entry in the air passenger market. 11 – 12: *Good analysis*: Good analysis of one barrier to entry OR basic analysis of two. 9 – 10: *Basic analysis*: basic analysis of one barrier to entry. **Level 2: (5–8 marks)** For an application of knowledge and understanding of barriers to entry in the UK air passenger market. 7-8 marks: *Good application*: 2 or more relevant barriers identified and explained. 5-6 marks: *Basic application*: 1 relevant barrier identified and explained. Answers in this level will identify and explain relevant barrier to entry but fail to analyse these in terms of how they stop firms from entering the air passenger market. In other words, such answers will describe the barrier rather than analysing it. As soon as two or more barriers are identified and explained then 7-8 marks will be rewarded.

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Question			Answer	Marks	Guidance	
					Content	Levels of response
			lower ACs and, hence, be able to lower prices below other firms – deterring them from entering the market (L3).			**Level 1: (1–4 marks)** For knowledge and understanding of what barriers to entry are. Answers in this level will provide a definition in terms of any obstacle to new firms entering the UK air passenger market. Simple definitions will receive 1–2 marks whilst answers which provide definitions and simple examples will gain 3–4 marks.

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Question			Answer	Marks	Guidance	
					Content	**Levels of response**
	(b)		**Discuss whether the UK government should raise indirect taxes, such as Air Passenger Duty, on all air travel in order to increase sustainability.** Candidates will be expected to analyse how increases in indirect taxes, such as APD, could be classed as increasing sustainability and THEN analyse why such a policy may not increase sustainability. *The key to this question is whether or not the issue of sustainability has been addressed. If not, then no matter how good the theoretical analysis of APD is, the answer is limited to a maximum of 15 marks.* **Possible analysis of why increasing indirect taxes, such as APD, could increase sustainability includes:** **Accept analysis and counter analysis of any indirect tax on air travel** <u>Written analysis of BOTH the following points</u>: • increased indirect taxes will force consumers to internalise their externalities/pay the full social cost of their actions/pay a tax equal to their external costs/increase private costs.(L2) Price rises (L2) • this will reduce consumption OR reduce quantity demanded (basic L3) for less sustainable modes of transport OR encourage consumers to switch to less environmentally damaging modes of transport/modal switch. (good L3)	20	**Level 4(a): possible judgement includes:** Arguably other policies, such as subsidies to rail services will provide a better alternative to planes. As such, these subsidies could be a more effective solution as people would be more willing to use alternative modes of transport. As such, other policies may be more successful in achieving 'modal switch' towards more sustainable modes of transport. **Annotation:** **Use L1, L2, L3, L4 and EE (judgement to note L4a) where this is achieved**	**Level 4(a): (16–20 marks)** For a discussion which includes a judgement as to how increases in indirect taxes, such as APD, could be deemed to increase **sustainability.** **NOTE: To reach L4 (a) balanced discussion must already be present.** 18-20 marks: *Balanced discussion with good judgement*. 16-17 marks*: Balanced discussion with weak judgement*. **Level 4(b): (11–15 marks)** For discussion of the extent to which increases in indirect taxes, such as APD, could increase sustainability. 13-15 marks: *Balanced discussion i*.e. good analysis on both sides 11-12 marks: *Basic discussion* (analysis of one side is only basic). **Level 3: (5–10 marks)** One sided analysis. In other words, analyses EITHER the fact that increases in indirect taxes, such as APD, will OR WILL NOT increase sustainability. 8-10 marks: *Good analysis*: one sided analysis which is good.

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Question			Answer	Marks	Guidance	
					Content	Levels of response
			• Hypothecation of tax revenue (L2) and **how** this either makes air travel more sustainable or encourages modal switch (L3) Accept diagrammatic analysis AS LONG as the diagram is clearly explained/developed with reference to reduced quantity demanded for airplanes as a non-sustainable mode of transport. Diagram must clearly show the supply curve shifting to the left and increased equilibrium price/lower quantity. **Possible analysis of why increased indirect taxes such as APD may not increase sustainability include:** With price inelastic demand for some air flights (L2), there will be little change in demand and hence overconsumption will remain (basic L3). Therefore there will still be allocative inefficiency and a misallocation of resources – not a sustainable use of resources (good L3). Business may absorb the tax therefore not passed on to passenger (L2) Hence overconsumption remains (basic L3) and allocative inefficiency – not sustainable (good L3). Many people see that there are few substitutes to using planes (or reference to XED) and therefore regardless of the price, people continue to use them (L2). Hence overconsumption remains (basic L3) and allocative inefficiency – not sustainable (good L3).			5-7 marks: *Basic analysis*: one sided analysis which is only basic in nature i.e. not linked to sustainability. (Answers which lack transport application will be at the bottom of the band i.e. either 5 or 8 marks) **Level 2: (3–4 marks)** For an application of knowledge and understanding of the impact of increased indirect taxes such as APD. **Level 1: (1–2 marks)** For knowledge and understanding of sustainability/indirect tax. *Quality of Written Communication* is assessed in this question. Please see page 5 for guidelines.

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Question			Answer	Marks	Guidance	
					Content	Levels of response
			Setting tax at the correct level can be difficult (L2), setting the correct level of APD to equal external costs will be difficult (L2). As a result, the tax may well be too small/high and hence overconsumption remains or underconsumption results (basic L3) and allocative inefficiency – not sustainable (good L3). If only applied to the UK, passengers may fly from European airports (L2) therefore not causing a fall in quantity demanded and overconsumption remains (basic L3) and not allocatively efficient/sustainable (good L3)			

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RECOGNISING ACHIEVEMENT

Tuesday 11 June 2013 – Morning

A2 GCE ECONOMICS

F584/01 Transport Economics

Candidates answer on the Question Paper.

OCR supplied materials:
None

Other materials required:
- Calculators may be used

Duration: 2 hours

Candidate forename		Candidate surname	

Centre number						Candidate number				

INSTRUCTIONS TO CANDIDATES

- Write your name, centre number and candidate number in the boxes above. Please write clearly and in capital letters.
- Use black ink. HB pencil may be used for graphs and diagrams only.
- Answer Section A and **one** question from Section B.
- Read each question carefully. Make sure you know what you have to do before starting your answer.
- Write your answer to each question in the space provided. If additional space is required, you should use the lined pages at the end of the booklet. The question number(s) must be clearly shown.
- Do **not** write in the bar codes.

INFORMATION FOR CANDIDATES

- The number of marks is given in brackets **[ ]** at the end of each question or part question.
- The total number of marks for this paper is **60**.
- The quality of your written communication will be taken into account in the marking of your answer to Section B.
- This document consists of **20** pages. Any blank pages are indicated.

A calculator may be used for this paper

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Turn over

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2

Changes in the UK bus market

The UK bus industry has undergone radical change in the past 30 years. For much of the 20th century, the industry was heavily regulated with most local bus services provided in the public sector by local councils. This all changed in the mid 1980s when local bus services were deregulated. This policy, which saw the removal of many barriers to entry, resulted in significant growth of the private sector with many new, privately owned bus companies setting up across the country.

Whilst this marked a significant departure from what had previously been the case in the industry, with newly emerging private firms aiming to maximise profits, the government still continues to play a role in the industry. Government support can take different forms which include grants and support for innovative transport schemes and also fuel subsidies which are paid to operators of local services (the '*Bus Service Operators' Grant*'), see Fig. 1.

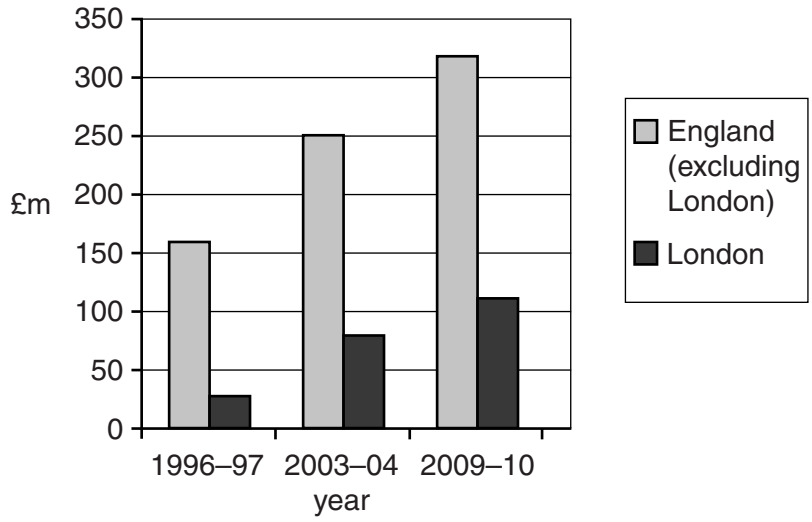


Fig. 1 – Estimated Bus Service Operators' Grant 1996–2010

Cambridgeshire guided busway opens to passengers

A long-awaited guided busway began carrying passengers on routes through Cambridgeshire in Autumn 2011. The route, which includes 13.3 miles of guided concrete track along a disused railway line, is believed to be the longest in the world. It is hoped that the busway will ease congestion on local main roads and provide an alternative mode of transport for people living in the area.

However, the £116.2m busway has not been the quickest, or easiest, of projects to deliver. Funding for the development of the busway was granted by the Department of Transport in 2001. It was expected to open in Spring 2009, but had been troubled by delays and financial disputes between the County Council and the original contractor.

Opinion as to the impact of the scheme is divided. One local resident claimed that it would be good for his business as they would no longer be in 'a remote village location'. In contrast, one group which had campaigned against the busway said that they remained 'utterly convinced' that it would make no difference to traffic levels on the local main roads and that it would definitely increase traffic levels in Cambridge city centre.

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SECTION A

Answer **all** parts of the question in this section.

1 **(a)** What is meant by the term 'barriers to entry'?

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..... **[1]**

(b) Apart from profit maximisation, state and explain **three** other objectives which a firm in a transport market may have.

1 .....

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2 .....

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3 .....

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[6]

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(c) (i) Using Fig. 1, compare the changes in the Bus Service Operators' Grant received by bus firms in London to those in the rest of England.

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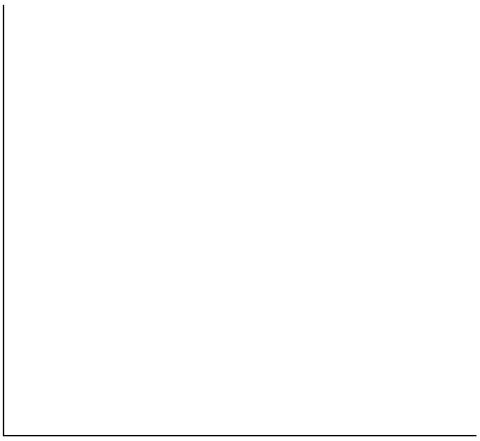
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(ii) Using a diagram, explain the impact of subsidies paid to producers, such as bus operators.



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(d) (i) Comment on the extent to which local bus markets in the UK are oligopolies.

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(ii) Discuss the effects of a rise in competition on the level of efficiency in a transport market.

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Section B begins on page 8

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SECTION B

Answer **one** question from this section.

2 **(a)** Analyse the reasons why traffic congestion is an example of market failure. **[15]**

(b) Discuss the effectiveness of indirect taxation on fuel as a method of solving market failure in transport. **[20]**

3 **(a)** Analyse the reasons for the growth in rail passenger numbers in recent years. **[15]**

(b) Discuss whether or not rail privatisation in the UK has been a success. **[20]**

4 **(a)** Analyse, using examples, what is meant by a 'sustainable' air transport policy. **[15]**

(b) Discuss whether or not the government should expand the road network in the UK. **[20]**

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SECTION B

Question No. .....

Start your answer to part **(a)** here

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Start your answer to part **(b)** here

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END OF QUESTION PAPER

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ADDITIONAL ANSWER SPACE

If additional answer space is required, you should use the following lined page(s). The question number(s) must be clearly shown in the margins.

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GCE

Economics

Advanced GCE

Unit **F584:** Transport Economics

Mark Scheme for June 2013

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All examiners are instructed that alternative correct answers and unexpected approaches in candidates' scripts must be given marks that fairly reflect the relevant knowledge and skills demonstrated.

Mark schemes should be read in conjunction with the published question papers and the report on the examination.

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Annotations

Annotation	Meaning
	Unclear
	Benefit of doubt
	Cross
	Effective evaluation
	Irrelevant
	Level 1
	Level 2
	Level 3
	Level 4
	Not answered question
	Noted but no credit given
	Too vague
	Tick
	Judgement/Level 4(a) awarded

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Subject-specific Marking Instructions

Some questions may have a 'Level of Response' mark scheme.

The following guidelines on the **quality of written communication** are embedded into the Levels of Response mark scheme used for part (b) of the essays and should be applied consistently between the different essays:

Level 4(b): Complex ideas have been expressed clearly and fluently using a style of writing which is appropriate to the complex subject matter. Sentences and paragraphs, consistently relevant, have been well structured, using appropriate technical terminology. There may be few, if any, errors of spelling, punctuation and grammar.

Level 3: Relatively straightforward ideas have been expressed with some clarity and fluency. Arguments are generally relevant, though may stray from the point of the question. There will be some errors of spelling, punctuation and grammar, but these are unlikely to be intrusive or obscure meaning.

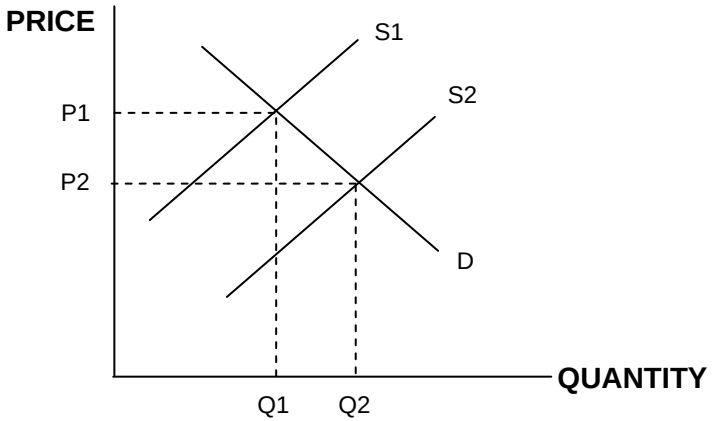
Level 2: Some simple ideas have been expressed in an appropriate context. There are likely to be some errors of spelling, punctuation and grammar of which some may be noticeable and intrusive.

Level 1: Some simple ideas have been expressed. There will be some errors of spelling, punctuation and grammar which will be noticeable and intrusive. Writing may also lack legibility

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Question			Answer	Marks	Guidance
1	(a)		**What is meant by the term 'barriers to entry'?** One mark for a clear definition in terms of a barrier being: *"an obstacle to new firms entering a market" OR* *"something which stops/deters/restricts a firm from entering a market"*	1	DO NOT accept examples of barriers to entry in a(i) DO NOT reward vague answers such as "something which protects a firm in a market".
	(b)		**Apart from profit maximisation, state and explain three other objectives which a firm in a transport market may have.** <u>Three marks for identifying alternative objectives including</u>: • sales/output maximisation **OR** increased market share **OR** market dominance • sales <u>revenue</u> maximisation (note: different to sales maximisation) • satisficing • managerial objectives / utility maximisation • long term growth **OR** growth maximisation • the avoidance of risk • survival / break even • providing a high quality service / public service objectives / maximising customer satisfaction • providing an environmentally sustainable service <u>Three marks are then available for explanation</u> of these objectives (see right hand side)	6	NOTE: This is a 3+3 question with three knowledge marks and three application marks. One mark for identification of each objective <u>One mark for explanation/development of this. For example</u>: • Explaining WHAT the objective is (NOT simply restating the objective) **OR** • Explaining WHY firms may target this objective **OR** • Explaining HOW firms may achieve this objective <u>For example</u>: *"Firm may pursue profit satisficing (1). This is where a firm just makes enough profit to keep shareholders happy rather than maximising profits. (1)"* *"Sales revenue maximisation (1) may be an objective where firms are willing to lower prices in order to sell more products and raise revenue (1) **OR** where MR=0 (1)"* *"Sales maximisation (1) may be an objective where firms are willing to lower prices in order to increase market share (1) **OR** is achieved where a firm produces where = AC=AR (1)"* *"Break even (1) is achieved where TC=TR (1)"*

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Question			Answer	Marks	Guidance
	(c)	(i)	**Using Fig.1, compare the changes in the Bus Service Operators' Grant received by bus firms in London to those received in the rest of England** **One mark** for a clear statement that the Bus Service Operators' Grant (BSOG) rose in both areas. One mark for stating EITHER: • that proportionally the rise in London was greater (where it more than tripled compared to it not quite doubling in the rest of England) **OR** • in absolute terms, London's grant has increased by less than the increase in grant to the rest of England.	2	Direct comparison of the **CHANGE** is vital here. They must make direct comparisons in their answers and can't simply refer to the SIZE of the grant to London or the rest of England.
		(ii)	**Using a diagram, explain the impact of subsidies paid to producers, such as bus operators.** A correct diagram can gain two marks:  One mark for explanation for reference to the fact that subsidies to producers will lower their costs of production.	3	Award two marks for the diagram: • one for rightwards shift of the supply curve, labelled • one for correct labelling (old/new equilibriums plus axes). One mark for explanation for the clear, explicit reference to the fact that subsidies paid to producers will reduce their costs of production (OR reduced private costs).

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Question			Answer	Marks	Guidance
	(d)	(i)	**Comment on the extent to which local bus markets in the UK are oligopolies.** **Two marks for analysis:** • *a small number of firms* in the bus market (1) **OR** there are five large providers of local bus services **OR** there is a high concentration ratio/highly concentrated markets • *high barriers to entry exist* in bus markets (1) such as start-up costs (eg research/advertising costs), predatory pricing & brand loyalty (1) • *Interdependence*: in some local bus markets, bus firms are interdependent (1) • *Collusion:* in some areas there is the possibility of collusion between local bus firms (1) • *Non price competition* is often preferred by bus firms (accept reference to price rigidity/rigidity) • *Non-profit maximisation* objectives pursued by bus firms (1) as they often firms just want to survive (1) • There is an element of price leadership with First Group being the largest provider of local services **Two marks are then available for discussion including:** • *Low barriers to entry after deregulation* so not oligopoly (1) as new firms only need to register their companies to begin running bus services (1) • *Profit maximisation:* most bus companies do profit max. unlike oligopoly firms. • *Price competition* does exist unlike in oligopoly markets • *Number of firms:* one firm dominates in some areas **OR** In other areas there are many firms (hence competitive/ monopoly markets, not oligopoly). **One mark for explicit judgement (see right hand side).**	5	*NOTE: no marks for simply stating oligopoly characteristics OR defining what an oligopoly market is. Answer MUST apply oligopoly characteristics to the local bus market.* **Two Analysis marks:** Award one mark for applying a relevant oligopoly characteristic. Then award a further mark for basic development of this. For example: *"There are high barriers to entry (1), such as high set up costs (1)"* *"The local bus market meets the characteristic of non-price competition (1) as firms have a kinked demand curve and will not want to compete on the basis of price (1)"* **Two Evaluation marks:** Award two marks for two separate evaluative statements **OR** for one evaluative point which is well developed. **One Judgement mark (ONLY if two sided analysis already present):** Award one mark for a clear statement such as *"Overall, for these reasons, the local bus market is/is not oligopolistic"* **OR** *"whether or not it is an oligopoly depends upon the extent to which barriers to entry have been reduced"*

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Question			Answer	Marks	Guidance
		(ii)	**Discuss the effects of a rise in competition on the level of efficiency in a transport market.** **Three marks for analysing why increased competition will increase efficiency:** • increased productive **OR** allocative efficiency (1) • increased dynamic **OR** X efficiency (1) • firms lower prices (1) and produce where P=MC (1) • firms have an incentive to cut costs/lower AC's **OR** reduce the number of scarce resources used (1) in order to lower price and remain competitive (1) • firms have to sell exactly what consumers want (1) **OR** increase the quality of the product (1) • firms have incentive to invest in new capital **OR** research and development (1) in order to lower unit costs (1) • firms have the incentive to innovate (1) • with people <u>switching</u> to lower priced public transport (1) there will be less negative externalities (1) **Three marks for analysing why increased competition will NOT increase efficiency:** • productive inefficiency (1). Firms lose economies of scale (1) with smaller firms not producing at lowest possible average cost (1) • allocative inefficiency (1) with duplication of services on profitable routes (1) wasting of scarce resources (1) • loss of dynamic efficiency (1) as smaller profits reduce investment in Research & Development (1) • less investment in technology (1) leading to older machinery & more pollution (1)–allocative inefficiency (1) • loss of co-ordination/fragmentation with more providers meaning greater externalities (1). **Two marks for explicit judgement (see right hand side)**	8	**NO marks for defining what competition is AND no marks for a general definition of economic efficiency which is not linked to rise in competition.** **<u>Three analysis marks:</u>** EITHER three separate statements OR one point which is well developed. For example: *"Competitive markets lead to firms wanting to lower prices (1). In order to do this they need to lower costs of production (1) and hence will be more productively efficient (1)"* *"In more competitive markets firms will lower prices (1) which will encourage more people to switch to public transport (1) and hence reduce negative externalities, increasing allocative efficiency (1)"* **<u>Three evaluation marks:</u>** EITHER three separate statements OR one point which is well developed. For example: *"Firms may lose economies of scale (1) with smaller firms producing a lower level of output therefore incurring higher average costs (1). This leads to productive inefficiency (1)"* **<u>Award two Judgement marks (ONLY if two sided analysis already present):</u>** *"Overall, increased competition will increase efficiency (1) but it all depends upon…. how long competition remains high for" (1) …..**OR** …..the existing level of output/number of firms(1)……**OR**…..which transport market is considered (1)"*

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Question			Answer	Marks	Guidance	
					Content	Levels of response
2	(a)		**Analyse the reasons why traffic congestion is an example of market failure.** **Possible analysis includes:** • Consumers ignore external costs of their actions (L2) **OR** do not take in to account full social cost (L2) **OR** only pay private costs (L2). The resulting price is then too low (basic L3) which is lower than the social optimum price (good L3) **OR** this price doesn't equal / reflect full social cost (good L3). • Overconsumption/overproduction occurs (L2) because the good is too cheap (basic L3) **OR** it is underpriced (basic L3). Correct negative externality diagram with reference to quantity overconsumed (good L3) **OR** Consumers therefore do not pay the full price of the good (good L3) **OR** At the lower price, consumers buy more of the product than society would like them to (good L3). • Allocative inefficiency occurs (L2) as scarce resources are wasted (basic L3) **OR** because of overconsumption of the good (basic L3). Too many scarce resources will be allocated towards producing these goods (good L3) **OR** society would prefer these scarce resources to be allocated to producing other goods and services (good L3).	15	A list of negative externalities (eg greater pollution/loss of output/lower productivity etc) only gains Level 1 marks. To reach Level 2 there needs to be explanation of why market failure arises (e.g. over-consumption occurs). In order to reach Level 3 there needs to be clear analysis of why traffic congestion is an example of market failure. **If no application to transport then mark at lower end of each band within the level (e.g. 13 / 11 / 9 / 7 / 5 / 3 / 1 marks).** A negative externality diagram can be used to analyse factors but the diagram must be accurate.	**Level 3: (9–15 marks)** Analysis of why traffic congestion represents market failure. 13–15 marks: *Very good analysis:* Good analysis of two or more aspects 11–12 marks: *Good analysis*: Good analysis of one OR basic analysis of two aspects. 9–10 marks: *Basic analysis:* basic analysis of one aspect. **Level 2: (5–8 marks)** For an application of knowledge and under-standing: identifies relevant points eg overconsumption/allocative inefficiency. 7–8 marks *Good application*: two or more relevant aspects identified and explained. 5–6 marks *Basic application*: one factor identified and explained. **Level 1: (1–4 marks)** Knowledge & understanding of negative externalities/market failure 3–4 marks: clear definition in terms of SC>PC OR a list of possible externalities arising from congestion. 1–2 marks: basic idea that traffic congestion is an example of a negative externality OR definition of market failure only.

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Question			Answer	Marks	Guidance	
					Content	Levels of response
	(b)		**Discuss the effectiveness of indirect taxation on fuel as a method of solving market failure in transport.** **Relevant analysis includes:** **A. Diagram analysis:** *'Basic analysis':* An accurately labelled diagram with an explanation of two of the following points. *'Good analysis'*: An accurately labelled diagram with explanation of 3 of the following points: • increases costs of production/MPC/ internalise negative externality • reduction of supply/supply shifts left • equilibrium price is raised • demand / equilibrium quantity falls **B. Written analysis of indirect taxes:** *'Basic analysis'* must cover two of the following points. *'Good analysis'* covers all three points: • higher indirect taxes on fuel increases firms' costs of production **OR** increases consumers' private costs **OR** internalises external costs • this reduces the incentive to supply the product **OR** shifts the supply curve to the left • this leads to higher price **AND** lower demand (DO NOT accept "more expensive so less driving"). *(**PTO** for third method of analysis.)*	20	**Possible judgement includes:** • The effectiveness ultimately depends upon how big the tax is – the bigger it is, arguably the more likely it is to deter car use. • The effectiveness depends upon whether it is used in conjunction with other policies or not. If used as part of a wider, integrated strategy, then it is likely that it may well encourage motorists to shift to other modes of transport.	**Level 4(a): (16-20 marks):** For balanced discussion (two sided analysis) with judgement. *NOTE: to reach L4(a) 'balanced' discussion must already be present.* 18–20 marks: balanced discussion with good judgement. 16–17 marks: balanced discussion with weak judgement. **Level 4(b): (11-15 marks):** For two sided discussion lacking judgement. 13–15 marks: balanced discussion (good analysis of both sides of the argument) 11–12 marks: basic discussion (two sided analysis but within this, one side of the argument is analysed in a basic manner) **Level 3: (5-10 marks):** One sided analysis ie analysis of why indirect taxes will **OR** will not be successful. 8–10 marks *Good analysis*: relevant analysis of why indirect taxation will **OR** will not be effective. 5–7 marks *Basic analysis*: analysis of why indirect taxes will OR will not be effective.

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Question			Answer	Marks	Guidance	
					Content	Levels of response
			C. Written analysis of hypothecation: 'Basic analysis': 2 of the following. 'Good analysis': all 3 of the following: • the tax will raise revenue/increase revenue for the government • this revenue can lower public transport fares **OR** increase quality • this encourages modal switch **OR** higher demand for public transport **OR** makes PED for cars more elastic **Analysis of limitations of indirect taxes include:** • to be accurate, the tax must be set equal to the external cost. If incorrect then over (or under) consumption will exist. Hence government failure. • to succeed, an alternative is needed in the form of reliable public transport. • inelastic PED exists for fuel and car use. In such cases, over-consumption will remain. • such taxes must be international. If not, haulage firms may simply relocate to other countries or, in extreme cases, may simply cross borders to avoid paying high fuel taxes and therefore avoid the taxes completely. • Other factors may reduce the effectiveness eg if incomes rise at the same time OR if car prices fall significantly. • High income groups will not be deterred as they can still afford to pay.		NOTE: criticisms MUST relate to why indirect taxes on fuel will not solve market failure. Therefore DO NOT reward general problems with indirect taxes eg regressive/inflationary **Theoretical answers which lack any relevant application to fuel duties will receive a mark at the bottom of the relevant 'band' (eg 5 / 7 / 11 / 13 marks)**	**Level 2: (3–4 marks):** For an application of knowledge and understanding of indirect taxes in transport. Answers in this level will provide examples of different indirect taxes which could be applied in transport markets eg fuel duty or Air Passenger Duty (APD) OR offer simple statements such as "indirect taxes increase prices" **Level 1: (1–2 marks):** For knowledge and understanding of what indirect taxes are. Answers in this level will simply state what indirect taxes are.

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Question			Answer	Marks	Guidance	
					Content	Levels of response
3	(a)		**Analyse the reasons for the growth in rail passenger numbers in recent years.** **Accept any relevant factors such as:** • increased incomes/GDP • growth in employment levels • population increases • increased price of substitutes • perceived increase in quality/reliability of rail services • improvements to rail infrastructure. • accept lower fares. • continued subsidies **Relevant analysis of these includes:** • rising incomes (L1): households can now afford rail travel (L2). This shifts demand curve to the right (basic L3) Rail travel is a 'derived' demand so higher incomes raise demand (good L3) OR as rail travel is a 'normal' good with positive YED, higher incomes will raise demand (good L3) • increased employment levels (L1). With more people in work there will be more commuting (L2). This shifts the demand curve to the right (basic L3) as passenger transport is a derived demand when employment rises, so will demand for rail transport (good L3). • increased price of substitutes (L1) for example, higher petrol prices (L2). This results in the demand curve shifting to the right (basic L3) OR people	15	Identification of factors = Level 1 Identification AND explanation of factors = Level 2 Analysis of HOW each factor results in a rise in passenger numbers = Level 3 To move from Level 2 to Level 3 there must be clear economic analysis of the factor rather than just description. In other words, economic terms, concepts or diagrams must be applied to account for the rise in rail passenger numbers. **If there is no application to rail passenger transport then mark at the lower end of each band within the level (eg 13 / 11 / 9 / 7 / 5 marks if not in context).**	**Level 3: (9–15 marks):** Analysis of HOW each factor results in a rise in passenger numbers. 13–15 marks: *Very good analysis:* Two or more factors clearly analysed. 11–12 marks: *Good analysis*: Good analysis of one factor OR basic analysis of two. 9–10 marks: *Basic analysis:* basic analysis of one factor **Level 2: (5–8 marks):** For an application of knowledge and under-standing of different factors: 7–8 marks *Good application:* two or more factors identified and explained. 5–6 marks *Basic application:* one factor identified and explained. **Level 1: (1–4 marks):** Knowledge & understanding of what factors may shift the demand curve. 3-4 marks: two or more general demand factors identified but not explained 1-2 marks: one factor identified only

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Question			Answer	Marks	Guidance	
					Content	Levels of response
			switching to rail <u>from another mode</u> (basic L3). This occurs due to a rise in price of car travel compared to rail travel (good L3) OR positive XED (good L3) • increased reliability OR quality (L1). With more services running on time (L2), the demand curve shifts to right (basic L3) OR people switch to rail from another mode(basic L3) Changing perceptions lead to higher demand at each and every price level (good L3). • improvements to rail infrastructure (L1) has reduced journey times OR improved quality (L2). This has led to the demand curve shifting to the right (basic L3) with more consumers switching from other modes due to improved quality (good L3). • Privatisation (L1) increased competition between providers (L2), this lowers price AND increases demand (basic L3). If developed in terms of increased supply (good L3). • subsidies (L1) have lowered price and increased demand (basic L3). Accept diagram analysis (good L3). • Population (L1) with more people there will be more people travelling for leisure and work purposes (L2) leading to rightwards shift of the demand curve (basic L3) and increased 'derived' demand for transport (good L3).			

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Question			Answer	Marks	Guidance	
					Content	**Levels of response**
	(b)		**Discuss whether or not rail privatisation in the UK has been a success.** **Possible benefits include:** • more firms compete for franchises/ raises competition (L2).This lowers fares (basic L3) & raises consumer surplus (good L3). Accept S/D analysis explained (good L3) • accept theory of the firm diagrams which explain price/efficiency changes with move from monopoly to competition (L3) • allocative efficiency (L2) as private sector firms want to provide exactly those goods and services consumers want (basic L3) or they lose market share/sales (good L3) • productive efficiency (L2) as firms produce at lowest possible cost (basic L3) to max. profits (good L3) **OR** minimise prices (good L3). • reduced 'X-inefficiency' (L2) as private sector firms want to minimise / reduce costs (basic L3) in order to profit maximise (good L3) **OR** to lower prices (good L3). • private sector may have more incentive to invest OR bigger sources of financial capital OR higher profits (L2) leading to dynamic efficiency gains (L3) OR product innovation / better quality (L3).	20	Possible judgement includes: • effectiveness depends upon how many firms are willing to bid for services in each franchise area. If few firms are willing to bid then there will be limited competition. • effectiveness depends upon how well regulated firms are once they win the franchise. • effectiveness may well depend upon how long the franchise runs for (a shorter period may lead to fewer firms wishing to compete due to limited time to recoup investment) • it depends upon whether looking at freight or passenger rail services. • Depends upon how much barriers to entry have been reduced by • it depends upon how we define "success" NOTE: ACCEPT RELEVANT THEORY OF THE FIRM DIAGRAMS WHICH, WHEN EXPLAINED, CAN GAIN ANALYSIS MARKS	**Level 4(a): (16-20 marks):** For balanced discussion (two sided analysis) with judgement. *NOTE: to reach L4(a) 'balanced' discussion must already be present.* 18–20 marks: balanced discussion with good judgement. 16–17 marks: balanced discussion with weak judgement. **Level 4(b): (11-15 marks):** For two-sided discussion lacking judgement. 13–15 marks: balanced discussion (good analysis of both sides of the argument) 11–12 marks: basic discussion (two sided analysis but within this, one side of the argument is analysed in a basic manner) **Level 3: (5-10 marks):** One sided analysis ie analysis of why rail privatisation has **OR** has not been successful. 8–10 marks: Good analysis: Good, relevant analysis of why rail privatisation has **OR** has not been successful. Economic analysis is 'good'.

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Question			Answer	Marks	Guidance	
					Content	Levels of response
			• increased passenger numbers reduce market failure/negative externalities (L2). This reduces allocative inefficiency (L3). • Raises revenue (L2) which allows government spending in other areas (basic L3) OR reduce taxes (basic L3) OR reduce budget deficit (basic L3) **Possible drawbacks include:** • limited competition with franchise system (L2) creating oligopoly/duopoly/ monopoly (L2) <u>leading to:</u> i. productive inefficiency as not producing at min. AC (L3). ii. allocative inefficiency as not producing at P=MC (L3). • higher fares (L2) have reduced consumer surplus (L3). Accept refs to price discrimination raising fares for L3. • whilst much debated, private firms may well ignore external costs in the pursuit of profit maximisation (L2) hence allocative inefficiency. (L3) • loss making routes closed (L2) OR end of cross subsidies (L2) has cut network and arguably caused some people to move to cars from public transport (L3) OR allocative inefficiency (L3) • loss of natural monopoly/EOS (L2) with firms not able to lower ACs/firms have higher ACs (basic L3) -productive inefficiency (good L3) • Cuts to subsidies (L2) raise fares (L3)		**DO NOT reward analysis of the advantages and disadvantages of nationalisation/government ownership – must explicitly refer to privatisation**.	5–7 marks: Basic analysis: Basic analysis of why rail privatisation has **OR** has not been successful. Economic analysis is 'basic'. **Level 2: (3–4 marks):** For an application of knowledge and understanding of rail privatisation. Answers in this level will identify relevant arguments for **OR** against without analysis. **Level 1: (1–2 marks):** For knowledge and understanding of what rail privatisation is. Answers in this level may state what privatisation is OR explain how rail was privatised in terms of distinction between infrastructure/rolling stock and use of franchising.

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Question			Answer	Marks	Guidance	
					Content	Levels of response
4	(a)		**Analyse, using examples, what is meant by a 'sustainable' air transport policy.** **Relevant analysis includes:** A.P.D (L1): tax flights equal to external costs (L2). This reduces output/demand (basic L3), solves overconsumption (good L3) and achieves allocative efficiency (good L3) **OR** a more efficient use of resources (good L3). Regulation (L1) eg banning high emission aircraft (L2) OR introducing higher emissions standards (L2). This reduces output (basic L3), ends overconsumption (good L3) and achieves allocative efficiency **OR** a more efficient use of resources (good L3). Government incentives to introduce new low emission aircraft (L1) eg subsidising new technology (L2). This encourages production/supply of low emission planes (basic L3), reduces pollution and hence achieves allocative efficiency **OR** a more efficient use of resources (good L3). Permit system (L1): permits issued to cover emission levels (L2). High polluting firms have to buy more hence incentive to reduce emissions (basic L3). As a result, allocative efficiency arises **OR** a more efficient use of resources (L3). PTO	15	By definition, a sustainable policy is one "which meets the needs of the present without compromising the ability of future generations to meet their own needs" (Bruntland Commission, 1987). Such a policy forces users to take in to account full (social) costs of their actions, therefore internalising negative externalities & correcting market failure. Identification of policies= Level 1 Identification AND explanation of policies = Level 2 Analysis of HOW each policy could be considered to be a sustainable air transport policy = Level 3 **If no application to air transport then mark at lower end of each band within the level (eg 13 / 11 / 9 / 7 / 5 / 3 / 1 marks).**	**Level 3: (9–15 marks)** 13–15 marks: *Very good analysis:* good analysis of two or more policies. 11–12 marks: *Good analysis*: Good analysis of one policy OR basic analysis of two. 9–10 marks: *Basic analysis:* Basic analysis of one policy. **Level 2: (5–8 marks)** For an application of knowledge and under-standing of different policies: 7–8 marks *Good application*: two or more policies identified and explained but not analysed. 5–6 marks *Basic application:* one policy identified and explained. **Level 1 (1–4 marks)** Knowledge & understanding of what a sustainable air transport policy is. 3-4 marks: Two or more relevant policies are identified OR knowledge of how air transport is not sustainable. 1-2 marks: One relevant policy is identified OR a basic definition of sustainability.

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Question			Answer	Marks	Guidance	
					Content	Levels of response
			Firms may invest profits into new technology (L1) which is designed to reduce emissions (L2). This increases production/supply of low emission planes (basic L3) and allocative efficiency results **OR** a more efficient use of resources (good L3)			

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Question			Answer	Marks	Guidance	
					Content	Levels of response
	(b)		**Discuss whether or not the government should expand the road network in the UK.** Relevant analysis of why the road network should be increased includes: • 'predict and provide' (L1): if future growth in demand is forecast then govt. should build more roads now (L2). Increased supply meets increased demand (basic L3). • increased supply (L2) lowers effective price of road use (basic L3). This increases consumer surplus (L3). • increased spending boosts AD (L2) and raises economic growth (L3) • Building roads reduces congestion (L2), reduces negative externalities OR less waste of scarce resources (basic L3) increasing allocative efficiency (good L3). • significant external benefits arise from road building (L2) eg regional multiplier effects and relocation of businesses. This increases employment (basic L3). Supply-side benefits of improved infrastructure (good L3). • if COBA or CBA produces a positive value for NSB then road building should go ahead (L2) as this provides a social welfare gain to society (L3) • road building at designated 'pinch points' could alleviate congestion (L2) and hence increase allocative	20	Candidates need to analyse why the government should and should not expand the road network. <u>Possible judgement includes</u>: • it depends where the roads are going to be built. Small scale projects, such as by-passes and local projects to reduce bottlenecks, may well be successful. In contrast, simply doubling the motorway network will arguably be less successful. NOTE: ACCEPT RELEVANT SUPPLY AND DEMAND DIAGRAMS SHOWING INCREASED SUPPLY (AND ALSO POSSIBLY INCREASED DEMAND TOO) AS LONG AS THESE ARE EXPLAINED.	**Level 4(a): (16-20 marks):** For balanced discussion (two sided analysis) with judgement. *NOTE: to reach L4(a) 'balanced' discussion must already be present.* 18–20 marks: balanced discussion with good judgement. 16–17 marks: balanced discussion with weak judgement. **Level 4(b): (11-15 marks):** For two-sided discussion lacking judgement. 13–15 marks: balanced discussion (good analysis of both sides of the argument) 11–12 marks: basic discussion (two sided analysis but within this, one side of the argument is analysed in a basic manner) **Level 3: (5-10 marks):** One sided analysis ie analysis of why rail privatisation has OR has not been successful. 8–10 marks: Good analysis: Good analysis of why the government should **OR** should not expand the motorway network. 5–7 marks: Basic analysis: Basic analysis of

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Question			Answer	Marks	Guidance	
					Content	Levels of response
			efficiency (basic L3). • roads are underprovided by the market (as a quasi-public good) (L2). Therefore govt provision needed to ensure allocative efficiency. (L3). Reasons why the government should not expand the road network include: • Road building generates negative externalities (L2) and hence market failure (pollution and congestion) (L2) which lead to allocative inefficiency (basic L3). Accept diagrammatic analysis of externalities (good L3) • Road building uses finite resources (L2) which is not sustainable (basic L3) as fewer resources are used to future generations (good L3) • Increasing supply of road space may generate more demand (L2). This increases negative externalities (basic L3) OR wastes scarce resources (basic L3) and greater allocative inefficiency (good L3) • Accept S&D analysis showing increased supply lowering price and raising demand (L3) • COBA / CBA is flawed (L2) therefore leading to inefficient allocation of resources (L3) • Cost to government (L2) which gives rise to opportunity cost issues (basic L3). For example forgoing spending on NHS (good L3)			why the government should **OR** should not expand the motorway network. **Level 2: (3–4 marks):** For an application of knowledge and understanding of road building. Answers in this level may simply identify relevant costs or benefits of building new roads without analysing these **Level 1: (1–2 marks):** For knowledge and understanding of road building policy OR sustainability. Answers will provide basic knowledge as to how the government undertakes road building schemes OR identify the 'predict and provide' without explanation. Alternatively, answers may state that the COBA method is used to decide whether or not to build roads (this gain two marks maximum).

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Tuesday 22 January 2013 – Morning

A2 GCE ECONOMICS

F584/01 Transport Economics

F5300401 13

Candidates answer on the Question Paper.

OCR supplied materials:
None

Other materials required:
- Calculators may be used

Duration: 2 hours

F 5 8 4 0 1

Candidate forename		Candidate surname	

Centre number						Candidate number				

INSTRUCTIONS TO CANDIDATES

- Write your name, centre number and candidate number in the boxes above. Please write clearly and in capital letters.
- Use black ink. HB pencil may be used for graphs and diagrams only.
- Answer Section A and **one** question from Section B.
- Read each question carefully. Make sure you know what you have to do before starting your answer.
- Write your answer to each question in the space provided. If additional space is required, you should use the lined pages at the end of the booklet. The question number(s) must be clearly shown.
- Do **not** write in the bar codes.

INFORMATION FOR CANDIDATES

- The number of marks is given in brackets **[ ]** at the end of each question or part question.
- The total number of marks for this paper is **60**.
- The quality of your written communication will be taken into account in the marking of your answer to Section B.
- This document consists of **20** pages. Any blank pages are indicated.

A calculator may be used for this paper

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Turn over

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High Speed Rail

In recent years, there has been much debate about 'High Speed 2' (HS2) which is the name given to government plans to introduce a new, high speed, train line from London to Birmingham and beyond. If introduced, such plans would represent one of the largest transport infrastructure projects undertaken in the UK in many years. The article and table below were produced as part of the government's consultation process.

Investing in the UK's future

The government believes that a national high speed rail network offers a once-in-a-generation opportunity to transform the way we travel in the UK.

A new high speed rail network would bring our key cities closer together, enable businesses to operate more productively, support employment growth and regeneration, and create a platform for delivering long term and sustainable economic growth and prosperity.

A Y-shaped high speed rail network would link London to Birmingham, Manchester and Leeds, and would include stops in the East Midlands and South Yorkshire, as well as at Heathrow Airport. It would deliver a huge increase in rail capacity to meet rising demand for long-distance rail travel and ease overcrowding on existing railways.

By linking to the existing East Coast and West Coast main lines, London would be brought within three and a half hours of both Glasgow and Edinburgh – significantly reducing the demand for internal flights. By attracting large numbers of passengers from other modes of transport, due to the improved journey times and the reliability and convenience that it would offer, HS2 could generate reductions in carbon emissions.

Fig. 1 shows the forecasted benefits and costs of the proposed scheme.

Benefits: Total benefit LESS loss of indirect tax revenues to the government	 £46.4 billion £2.7 billion	**Total net benefit** **£43.7 billion**
Costs: Total costs to the government LESS revenue from ticket sales	 £44.3 billion £27.2 billion	**Total net costs** **£17.1 billion**
Benefit to cost ratio		**2.6**

Fig. 1 – Forecasted benefits and costs of HS2

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SECTION A

Answer **all** parts of the question in this section.

1 (a) (i) What is meant by the term 'transport infrastructure'?

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..... **[1]**

(ii) State and explain **one** possible advantage to freight operators of using rail as a mode of transport.

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..... **[2]**

(b) (i) State and explain **two** problems which the government may have in making forecasts such as those in Fig. 1.

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2 .....

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..... **[4]**

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(ii) Fig. 1 refers to £2.7 billion of lost revenue from indirect taxes as a result of the 'High Speed 2' (HS2) project.

Explain why this loss of tax revenues may arise.

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..... **[2]**

(c) The construction of a new high speed rail line may cause negative externalities.

Explain why negative externalities are an example of market failure.

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..... **[3]**

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(d) (i) The information in the case study suggests that high speed rail may encourage people to switch modes of transport.

Other than road pricing, comment on the effectiveness of **one alternative** policy which aims at encouraging people to switch modes of transport in order to reduce congestion.

Chosen alternative policy .....

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..... **[5]**

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(ii) Discuss the effectiveness of cost-benefit analysis as a method of allocating resources in transport.

.... **[8]**

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Section B begins on page 8

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SECTION B

Answer **one** question from this section.

2 **(a)** Analyse the economies of scale which may arise in a transport market of your choice. **[15]**

(b) Discuss whether deregulation has been a success in a transport market of your choice. **[20]**

3 **(a)** Analyse the factors which might lead to a rise in contestability in a transport market. **[15]**

(b) Discuss the extent to which a rise in contestability is beneficial in a transport market. **[20]**

4 **(a)** Analyse the factors which have led to a rise in car use in recent years. **[15]**

(b) Discuss the extent to which a national road pricing system would be effective in reducing the demand for car use. **[20]**

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SECTION B

Question No. .....

Start your answer to part **(a)** here

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Start your answer to part **(b)** here

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END OF QUESTION PAPER

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ADDITIONAL ANSWER SPACE

If additional answer space is required, you should use the following lined page(s). The question number(s) must be clearly shown in the margins.

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GCE

Economics

Advanced GCE

Unit **F584:** Transport Economics

Mark Scheme for January 2013

Oxford Cambridge and RSA Examinations

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This mark scheme is published as an aid to teachers and students, to indicate the requirements of the examination. It shows the basis on which marks were awarded by examiners. It does not indicate the details of the discussions which took place at an examiners' meeting before marking commenced.

All examiners are instructed that alternative correct answers and unexpected approaches in candidates' scripts must be given marks that fairly reflect the relevant knowledge and skills demonstrated.

Mark schemes should be read in conjunction with the published question papers and the report on the examination.

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Annotations

Annotation	Meaning
	Unclear
	Benefit of doubt
	Cross
	Effective evaluation
	Irrelevant
	Level 1
	Level 2
	Level 3
	Level 4
	Not answered question
	Noted but no credit given
	Too vague
	Tick
	Judgement/Level 4(a) awarded

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Subject-specific Marking Instructions

Some questions may have a 'Level of Response' mark scheme. Any details about these will be in the Additional Guidance. Some questions may have a 'Level of Response' mark scheme. Any details about these will be in the Additional Guidance.

The following guidelines are generic to each Level of Response mark scheme used for part (b) of the essays and should be applied consistently between the different essays:

Level 4(b): Complex ideas have been expressed clearly and fluently using a style of writing which is appropriate to the complex subject matter. Sentences and paragraphs, consistently relevant, have been well structured, using appropriate technical terminology. There may be few, if any, errors of spelling, punctuation and grammar.

Level 3: Relatively straightforward ideas have been expressed with some clarity and fluency. Arguments are generally relevant, though may stray from the point of the question. There will be some errors of spelling, punctuation and grammar, but these are unlikely to be intrusive or obscure meaning.

Level 2: Some simple ideas have been expressed in an appropriate context. There are likely to be some errors of spelling, punctuation and grammar of which some may be noticeable and intrusive.

Level 1: Some simple ideas have been expressed. There will be some errors of spelling, punctuation and grammar which will be noticeable and intrusive. Writing may also lack legibility.

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Question			Answer	Marks	Guidance
1	(a)	(i)	<u>One mark for a clear definition</u>: "anything that provides for the operation of transport" OR "permanent installations needed for firms to provide transport services" **Alternatively, accept statements which recognise that infrastructure is <u>anything which enables transport services to be provided</u>.** <u>DO NOT reward</u> vague comments such as: "infrastructure is <u>how</u> transport modes operate" "those things which allow different modes of transport to travel" "objects allowing transport to run" "factors that allow transport to be possible"	1	DO NOT accept examples of infrastructure Only reward ONE clear statement.
		(ii)	<u>One knowledge mark for any relevant advantage such as</u>: • lower carbon emissions • bulk transit • avoiding road congestion • will be more efficient • will result in firms enjoying lower costs • faster journeys <u>One mark for explaining this advantage</u>: The explanation can take the form of EITHER explaining why the advantage arises OR developing the consequences of the advantage. For example: "Bulk transit occurs (1) because trains are able to carry larger numbers of containers which each contain larger amount of products (1)" "Bulk transit occurs (1) which allows firms to benefit from economies of scale (1) OR lower unit costs" (1) "lower costs (1) due to bulk transit lowering AC's (1)"	2	NOTE: This is a 1+1 question with one knowledge mark and one application mark One mark for the identification of a relevant advantage. One mark for and explanation of this advantage. **NOTE: if no relevant advantage is identified, then a mark of zero is awarded.**

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Question			Answer	Marks	Guidance
	(b)	(i)	This question asks candidates to identify the problems with the forecasting process itself. DO NOT reward references to the resulting forecasts being estimates as this is not a problem of the process. BUT DO reward the idea that samples used in surveys may not be representative of the population as a whole. Two marks for identifying two specific problems such as: • Attaching monetary values to costs and benefits OR what shadow price to use?(DO NOT reward reference to "ignoring negative externalities") • What factors to include in any CBA or forecast • Uncertainty / unforeseen changes may occur • What discount rate should be used? • Survey samples may be unrepresentative / skewed. • The cost of research to establish forecasts. • The process is time consuming • Data issues: Estimated data such as GDP estimates / population data / fuel prices / commuting times / historic data used in forecasting may be wrong (DON'T accept references to "data/ forecasts are inaccurate "without specific reference to WHAT data) Explanation: This must develop the nature of the problem itself. Eg: • "it is difficult to establish monetary values for negative externalities (1), for example the damage done to habitats and wildlife (1)" • "it is difficult to establish monetary values for costs and benefits (1). This is because these are intangible and involve subjective opinions(1)" • "Future events are uncertain (1) such as possible oil price shocks (1) or world recession (1)" ***DO NOT** award second mark where the **consequences** of incorrect forecasting are explained – see right hand side.*	4	NOTE: This is a 2+2 question. For each problem, One mark is awarded for knowledge and One mark for explanation. For example: "One problem is uncertainty (1). When making forecasts we have to try to predict what will happen in the future which is incredibly difficult as there can be unforeseen events such as recession (1)". "Difficulties in attaching values to issues which have no market price (1), for example, the value of lost time (1)" **If no correct problems are identified then a mark of zero is awarded.** *For explanation mark, do not award this where the consequences of incorrect forecasting are developed.* For example: "Future GDP estimates could be wrong (1) hence leading to forecasts being wrong" (NO explanation mark). "It is difficult to place monetary values on negative externalities (1) which could lead to projects being undertaken which should not be" (NO explanation mark) "Forecasting is costly (1) and this leads to there being an opportunity cost issue" (NO explanation mark). Here they need to develop WHY it is costly (employing analysts and processing data over a long period of time). **IN BRIEF: DO NOT reward the second mark simply for stating "this means that the forecast will be wrong"**

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Question			Answer	Marks	Guidance
		(ii)	One mark for identifying any relevant tax which will be affected including: • Excise duties (accept "duties" but NOT "fuel tax") • VAT • Air Passenger Duties. • Accept reduced V.E.D. (but NOT "road tax") as people may sell cars. One mark for an explanation as to why this is the case. For example, with people switching from car use / short haul planes there will be a reduction in the number of people using cars/planes and therefore a loss of tax revenue.	2	One mark for the identification of any relevant indirect tax which may be affected by HS2. One mark for explanation of why this tax is affected. For example: "HS2 will see a reduction in tax revenue from excise duties on fuel (1). This is because people will switch modes of transport from car to rail, hence buying less fuel and therefore paying less excise duty on fuel (1)".
	(c)		<u>One knowledge mark is available for any **one** of the following explicit statements</u>: • Consumers fail to pay the <u>full</u> <u>social</u> costs of their actions • Consumers ignore (OR do not pay) the external costs of their actions OR consumers ignore negative externalities • The price which consumers pay is too low compared to the social optimum price OR society would prefer the price charged to be higher OR the consumer does not pay the full price of the product. <u>Two marks are available for applying this knowledge</u>. Award **one mark** for each of the following statements: • An explicit statement that consumers overconsume the product (accept reference to overproduction) • Too many scarce resources will be allocated towards their production OR allocative inefficiency will occur OR resources are not allocated efficiently	3	NOTE: this is a 1+2 question For example: "Negative extemalities arise where individuals ignore the external costs of their actions (1). This results in market failure as there is overconsumption of the good (1) and hence allocative inefficiency (1)". There is NO MARK for defining a negative externality here.

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Question			Answer	Marks	Guidance
	(d)	(i)	Accept any relevant policy such as subsidies, indirect taxes and deregulation / privatisation. **Award two marks for analysis of how the policy works:** Diagram analysis: shift of supply curve / MPC (1) & clearly labelled change in equilibrium price AND quantity (1) Written analysis that subsidies lead to: • lower prices/fares OR lower costs of production (1) • increased supply / production OR higher demand for public transport (1) OR lower demand for cars (1) Written analysis that indirect taxes lead to: • higher prices/fares OR higher costs of production (1) • lower supply /production OR lower demand for cars (1) OR higher demand for public transport (1) **Award two marks for relevant evaluation of the policy:** • inelastic PED for cars means tax less effective • inelastic PED for public transport means subsidies less effective • perceived poor quality of alternatives to cars means that there is seen to be no viable substitute / XED • Inferior goods: Negative YED: with rising incomes subsidising the price of public transport will be less effective • Firms may use subsidies to raise profits rather than increasing service provision / quality • Size of subsidy / tax will determine the effectiveness. • Taxes must be enforced / policed to be effective **Award one mark for clear judgement:** For example, "Overall this policy will be effective if….." OR "Overall this policy will not be effective because……"	5	This is a 2+2+1 question with two marks for analysis, two for evaluating the policy and a final mark for an explicit judgement / conclusion. NOTE: The final mark is to be awarded for explicit judgement on how effective the chosen policy is. For the first two analysis marks, reward diagrams (even if not explained) for analysis marks. NOTE: ANY DIAGRAM CAN ONLY GAIN ANALYSIS MARKS IF PERFECTLY ACCURATE For second analysis mark, there must be explicit reference to the impact of the policy on supply or demand. Award two marks for two separate evaluative statements **OR** for one evaluative point which is well developed. **A response lacking any analysis of HOW the policy works will immediately gain a mark of zero for this question** **NOTE: as question asks for the effectiveness of this policy in achieving modal switch any criticism MUST explain why modal switch may not occur.** Therefore, DO NOT reward reference to the fact that the subsidy might be costly OR that indirect taxes are regressive.

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Question			Answer	Marks	Guidance
		(ii)	**Three marks for analysis of CBA:** • CBA compares / measures costs & benefits **OR** advantages and disadvantages **OR** arrives at a benefit : cost ratio • CBA attaches monetary values to costs/benefits OR uses 'shadow prices' • CBA forecasts future costs/benefits OR discounts future costs/benefits • CBA will attach probabilities to uncertainties • *Projects go ahead only where benefit >cost OR there is a net benefit OR where NPV OR NSB is positive OR do not proceed if cost > benefit* • *Selecting projects with positive NPV etc ensures an efficient allocation of resources* **Three marks are available for relevant evaluation**: • Hard attaching monetary values to costs/ benefits • 'Shadow prices' may be inaccurate • CBA is time consuming and expensive • What factors should be included? This implies value judgements and subjectivity • Local campaigning can pressure decision makers to make to make the wrong decision. • What 'weights' should be attached to costs/benefits? • What discount rate should be used? • Human error in collection of data OR inaccurate data used (eg out of date) • If CBA makes wrong policy choice then inefficient /misallocation of scarce resources & welfare loss. **Two marks are available for a clear judgement:** 1 mark for a simple statement, such as *"Overall, CBA is not totally effective" OR "CBA is effective"* 2 marks for clearly developed judgement, such as *"Overall, CBA is effective but depends upon accuracy of data used"*	8	This is a 3+3+2 question. Three marks for analysing how CBA works, three marks for analysing the limitations and two marks for a judgement of the effectiveness of CBA. NOTE: this is a question on CBA rather than COBA. Therefore DO NOT reward the criticism that negative externalities are ignored. ***FOR THIRD ANALYSIS MARK, MUST INCLUDE ONE OF THE FINAL TWO BULLET POINTS UNDERLINED*** Award three marks for three separate evaluative statements OR for one evaluative point which is very well developed. As the question asks specifically about the effectiveness of CBA in determining the allocation of resources, DO NOT reward simple statements such as "CBA is ineffective as the data is only estimated" is too vague. Likewise, DO NOT reward "some effects are unforeseen" OR "some data will be inaccurate" **A response lacking any analysis of HOW CBA works will immediately gain a mark of zero for this question**

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Question			Answer	Marks	Guidance	
					Content	Levels of response
2	(a)		Candidates should analyse the different economies of scale in transport markets. If there is no relevant application made to transport markets then award a mark at the bottom of the relevant level (eg 5 marks OR 9 marks). An answer with no transport application can therefore gain 9 marks max. **Relevant economies of scale include:** • Technical • Purchasing/commercial • Managerial • Financial • Risk bearing (or economies of scope) • Marketing • Selling • Improved infrastructure • The development of 'cluster' firms (around an airport, for example) • Firms colluding in an industry to fund R&D **Relevant analysis of these include:** Purchasing EOS (L1) arise with airlines buying fuel in greater bulk (basic L2). This results in lower Average Costs (basic L3) as firms are able to gain discounts and hence the cost of buying each successive unit of fuel diminishes despite total cost rising (good L3)	15	**Level 1** = identification of types of economies of scale **Level 2** = identification AND explanation of economies of scale **Level 3** = analysis of HOW each economy of scale results in lower average costs OR lower costs per unit The key difference here is between L2 and L3. To gain analysis marks, candidates must analyse why the example given results in lower Average Costs . **An answer simply listing types of EOS can gain up to 4 marks max. (Level 1).** Simple reference to "*For example, purchasing / financial EOS (1) lead to lower AC"* IS NOT ANALYSIS until there is some explanation of why average costs fall.	**Level 3: (9–15 marks)** Analysis of HOW each named economy of scale results in lower AC's. *If there is no reference to falling LONG RUN average costs (either on a diagram or in writing) then mark at the lower end of each band within the level (eg 13-14 / 11 /9 marks).* 13–15 marks: *Very good analysis:* Good analysis of two or more economies of scale in the context of a transport market 11–12 marks: *Good analysis*: Good analysis of one economy of scale OR basic analysis of two in transport context 9–10 marks: *Basic analysis:* Basic analysis of one economy of scale. **Level 2: (5–8 marks)** For an application of knowledge and understanding of different econs of scale: 7–8 marks: 2 or more economies of scale identified and explained in the context of a transport market.

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Question			Answer	Marks	Guidance	
					Content	Levels of response
			Technical EOS arise (L1) as when firms expand they take advantage of larger capacity planes / trains (L2). With larger planes / trains, firms will benefit from lower average costs (basic Level 3). This is because capacity may double but total costs of running planes rise more slowly. Hence reducing average costs (good L3). Managerial EOS occur (L1) with airlines / train companies now able to employ specialist managers, for example HR and accountants (L2). Such specialists will allow the firms to benefit from lower AC's (basic Level 3). Specialists should be more productive ….. increasing output and lowering AC's (good L3). Improved infrastructure provision is an external EOS (L1). For example, the growth of transport firms may well result in local authorities building new and improved roads nearby (L2) which enables firms to enjoy lower AC's (basic L3). This is because improved infrastructure cuts the cost of delivering catering / fuel to airports, therefore lowering AC's (good L3) in the long run.			5–6 marks: One transport economy of scale identified and explained in the context of a transport market = 6 marks One or more economies of scale identified and explained but NOT in a transport context = 5 marks **Level 1: (1-4 marks)** Knowledge & understanding of economies of scale: 3–4 marks: identification of two or more economies of scale not applied to transport markets 1–2 marks: identification of one economy of scale not applied in transport markets OR a general definition of EOS

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Question			Answer	Marks	Guidance	
					Content	**Levels of response**
	(b)		To gain L4, two sided analysis is needed of benefits AND costs of deregulation. **Deregulation has succeeded**: A. Reduced barriers to entry (L2) increases competition as it is easier for firms to enter the market OR more firms enter the market (basic L3) OR more choice for consumers (basic L3). B. Increased competition (L2) Relevant analysis includes: • Explained theory of the firm diagrams showing the move from monopoly to competitive markets (L3) • Basic S&D analysing increased competition via increased supply and lower equilibrium price (L3) • Written analysis in terms of increased market supply lowering equilibrium prices (basic L3) • Analysis of lower prices increasing consumer surplus (L3) OR leading to modal switch and reduced pollution / congestion / external costs (basic L3) C. Increased efficiency (L2): • Productive efficiency (L2) / reduced 'X inefficiency' (L2) as firms produce at minimum AC (basic L3). Competing firms need to minimise costs in order to lower prices – hence incentive to lower AC's (L3). Such gains have been realised with the introduction of 'Hopper' style buses	20	**Level 4(a): Possible judgement includes:** • The impact of varies from one part of the country to another OR from SR to LR. • The impact varies from one industry to another. Arguably deregulation has been more successful in the airline industry than with buses. • The impact depends upon how active the government is in regulating the industry concerned. • Other barriers exist (not just legal ones) and hence transport markets are still not contestable even though it may have successfully removed some. The key difference here is between identifying and analysing benefits and / or costs. For example: Simple explanation / description of which barriers have been lowered gains only L2 as there is no analysis of the consequences eg *"The legal requirement to prove that there is a "need" for bus services has been removed and bus operators only need to register with Transport Commissioners in order to run a service"* (L2).	**Level 4(a): (16–20 marks)** For two sided analysis AND judgement of how successful deregulation has been *NOTE: to reach L4(a) balanced discussion must already be present.* 18–20 marks: balanced discussion with good judgement 16–17 marks: balanced discussion with weak judgement **Level 4(b): (11–15 marks)** For two sided discussion lacking judgement. 13–15 marks: balanced discussion 11–12 marks: basic discussion (where there is only basic analysis of one side of the argument). **Level 3: (5–10 marks)** One sided analysis ie analysis of why deregulation has OR has not been successful. 8–10 marks *Good analysis*: relevant analysis applied explicitly to the air or bus industries. 5–7 marks *Basic analysis*: relevant analysis of deregulation theory not

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Question			Answer	Marks	Guidance	
					Content	Levels of response
			• Dynamic efficiency gains (in LR) (L2) – firms invest more in R & D and create new, innovative products (L3) • Allocative efficiency (L2) as, in theory, firms produce where P=MC (basic L3). Firms now have a clear incentive to produce goods and services which consumers demand, or risk losing market share (L3). **Deregulation has not been successful** • Duplication of services on existing profitable routes (L2) wasting scarce resources (L3) OR allocative inefficiency (basic L3). • Non profitable routes cut (L2) despite being socially desirable – allocative inefficiency (basic L3) • Negative externalities with more firms providing services (L2). Explicit recognition that his creates a negative impact upon 3rd parties (L3) OR leads to over-consumption/ production (L3) OR allocative inefficiency (L3) • Oligopoly or monopoly often results (L2). Accept relevant analysis of inefficiency / higher prices in these market structures (L3) OR the lack of incentive to keep costs/price down due to lack of competition (L3)		BUT award L3 for basic analysis eg "Deregulation has led to lower air fares (L2) with the resulting gain to consumers illustrated through increased consumer surplus" (L3) <u>In terms of drawbacks</u>: Higher prices (L2) but only gains analysis marks when analysed in terms of WHY these occur (in other words, with reference to monopoly / oligopoly / supply and demand theory) **OR** the consequences of higher prices (in terms of reduced consumer surplus). Accept increased negative externalities as a possible drawback due to increased service provision BUT only award analysis marks where overconsumption OR allocative inefficiency is developed. NOTE: reference to London as an example is NOT relevant as buses were not deregulated here.	specifically applied to a transport market OR very basic analysis in context. **Level 2: (3–4 marks)** For an application of knowledge and understanding of deregulation in the bus or air industry. Answers in this level will simply describe changes in the bus or air industry. In other words, applying knowledge of changes in the bus industry. **Level 1: (1–2 marks)** For knowledge and understanding of what contestability is. Answers in this level will simply state what deregulation or contestability are.

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Question			Answer	Marks	Guidance	
					Content	Levels of response
			• Anti-competitive behaviour (such as predatory pricing) by existing firms (L2) who sell below cost in SR (L2), drive new firms out of market (basic L3) OR stops new firms entering (basic L3) and limit competition (L3). • Loss of supernormal profit (L2)…less R&D spending (L2) leading to loss of dynamic efficiency (L3) • Possible loss of economies of scale (L2) leading to higher prices (basic L3) due to firms incurring higher AC's (L3).			

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Question			Answer	Marks	Guidance	
					Content	Levels of response
3	(a)		By definition, a contestable market is one where barriers to entry are free and costless. An increase in contestability means that there is greater chance of new firms entering the market and influencing behaviour of existing firms. **Relevant factors which may explain a rise in contestability include:** • A reduction in barriers to entry (L1) • A reduction in barriers to exit (L1) OR a fall in sunk costs (L1) • Legislation /regulation (L1) (Accept answers which analyse two different barriers to entry as providing two discreet points of analysis). **Relevant analysis of these include:** Lower barriers to entry (L1) such as lower legal barriers such as licensing (L2) will mean that it is easier for new firms to enter the market and hence the market is more contestable (basic level 3). This is because new firms will no longer be barred by legal requirements which may hinder firms from entering the market and therefore stop firms being able to enter the market (L3).	15	**Level 1** = Identification possible factors **Level 2** = Identification AND explanation of factors **Level 3** = Analysis of HOW each factor leads to increased contestability The key distinction between Level 2 and Level 3 is whether or not explanation becomes analysis. A Level 2 answer describes factors which lead to a rise in contestability whilst a Level 3 answer clearly analyses how each factor increases contestability. Basic analysis will state that the identified factor will make it easier for firms to enter the market, hence making the market more contestable. Good analysis will develop this further by explaining WHY firms will be more able to enter the market. *If there is no application to transport then mark at the lower end of each level*	**Level 3: (9–15 marks)** Analysis of HOW factor results in a rise in contestability. 13–15 marks: *Very good analysis:* Good analysis of two or more factors in a transport context. 11–12 marks: *Good analysis*: Good analysis of one factor OR basic analysis of two in a transport context. 9–10 marks: *Basic analysis:* Basic analysis of one factor OR clear analysis of factors NOT applied in a transport context. **Level 2: (5–8 marks)** For an application of knowledge and understanding of different factors: 7–8 marks *Good application*: 2 or more factors identified and explained in a transport context 5–6 marks *Basic application*: 1 factor identified & explained in a transport context OR several factors identified and explained but NOT in transport context

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Question			Answer	Marks	Guidance	
					Content	Levels of response
			Reduction of barriers to exit / sunk costs (L1) such as the cost of buying trains / planes (L2). With the move towards leasing of planes and trains, firms will find it easier to enter markets as they will not incur losses from selling assets on leaving the market (basic L3). This will encourage firms to enter the market as there will be a lower financial penalty involved (simply ending the lease) if they were to exit the market (good L3). Laws which prohibit limit pricing (L1) for example, incumbent bus companies using their economies of scale to lower fares knowing that new firms could not possibly afford such low fares (L2). If this occurs then potential entrants will be able to enter the market much more freely (basic level 3) because they will be able to compete freely against existing suppliers who will no longer be able to undercut them using their market power and economies of scale to do this. (Good L3).			**Level 1: (1–4 marks)** Knowledge & understanding of what a contestable market is. 3–4 marks: identification of two or more characteristics of a contestable market not applied to transport. 1–2 marks: identification of one characteristic not applied in transport markets OR a general definition of contestability.

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Question			Answer	Marks	Guidance	
					Content	Levels of response
	(b)		Candidates need to analyse the benefits & costs of a rise in contestability. **Possible benefits include:** • Monopolists may well lower price in order to avoid making supernormal profits which could attract new firms in to the market (L2). This increases consumer surplus (L3) • Accept diagram analysis showing firm producing at AC=AR in order to make only normal profits (L3) • Firms are allocatively efficient (L2) as they want to provide products which consumers demand in order to survive in competitive markets (L3). Firms are productively efficient (L2) as they want to lower costs (L2) to lower prices (L3). • Analysis of increased supply (L2) leading to lower prices (basic L3). Accept diagram showing increased supply/lower prices (L3) • In theory, fares should be lower as firms will feel threatened by the entry of new firms in to the market (L2) - consumer surplus rises (L3). • Dynamic efficiency OR greater R&D OR innovation (L2) firms wish to stay ahead of rivals and retain market share (L3) OR this lowers AC's (L3) • Lower prices (L2) leads to modal switch towards public transport, reducing negative externalities (L3)	20	**Level 4(a): Possible judgement includes:** • The impact depends upon exactly how substantial the rise in contestability is • The impact depends upon how long the market remains contestable for • What matters is not the actual ease of entry in to the market but the perception of whether new firms will be able to enter the market or not. • It depends upon WHO we are interested in looking at the impact upon ie which group in society.	**Level 4(a): (16-20 marks)** For two sided analysis AND judgement of whether or not a rise in contestability is beneficial. 18–20 marks: balanced discussion with good judgement 16–17 marks: balanced discussion with weak judgement *NOTE: In order to reach L4(a) 'balanced discussion must already be present.* **Level 4(b): (11–15 marks)** For two sided discussion lacking judge-ment. 13–15 marks: balanced discussion 11–12 marks: basic discussion where there is only basic analysis of one side of the argument. **Level 3: (5–10 marks)** One sided analysis ie analysis of whether increased contestability is OR is not beneficial. 8–10 marks Good analysis: relevant analysis applied explicitly within a transport context

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Question			Answer	Marks	Guidance	
					Content	Levels of response
			Possible drawbacks include: • Contestable markets will not make supernormal profits and will not be able to invest in R&D (L2). Therefore, firms will not enjoy dynamic efficiency gains (L3) OR lower quality product/service (L3) • If firms fear that expansion (and supernormal profits) will attract 'hit and run' firms then they may not expand and lose benefits of econs of scale (L2) – productive inefficiency (L3) • Increased contestability can lead to increased levels of competition and hence loss of economies of scale (L2) / natural monopoly (L2) / higher AC's (L2) and consumers face higher prices (L3). • Possible cost cutting / Health and Safety risks in highly competitive markets (L2) impacting upon 3rd parties (L3) • Negative externalities with more firms providing services (L2). Explicit recognition that his creates a negative impact upon 3rd parties (L3) OR leads to overconsumption / production (L3) OR allocative inefficiency (L3)		**MUST HAVE EXPLICIT STATEMENTS THAT CONTESTABILITY IS BAD**	5–7 marks Basic analysis: relevant analysis of contestability not specifically applied to transport OR very basic analysis in a transport context. **Level 2: (3–4 marks)** For an application of knowledge and understanding of what increased contestability means. Answers in this level will simply describe the characteristics of a contestable market. **Level 1: (1–2 marks)** For knowledge and understanding of what contestability is. Answers in this level will simply state what is meant by OR define contestability.

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Question			Answer	Marks	Guidance	
					Content	Levels of response
4	(a)		**Accept relevant factors such as:** • Lower car prices and/or lower running costs in real terms • Increased incomes/prosperity/GDP • Increased price of substitute goods OR reduced quality of substitutes • Reduced price of complements • Shifts in tastes and fashions away from buses to cars • Population growth • Increased employment (accept as different to income/GDP) • Growth of UK road network (accept simple analysis of this in terms of ↑ supply ↓ price). NOTE: Answers not referring at all to <u>car use</u> gain a maximum of 9 marks only. **Relevant analysis of these:** *NOTE: DO NOT reward analysis of <u>why</u> higher price / higher income /increased population has occurred. Only reward analysis of car use has increased.* Lower prices (L1) result in more consumers being able to afford cheaper cars (L2). This can be illustrated by a demand curve with lower price leading to an extension of demand for cars (basic L3). At the lower price, more people switch to cars away from relatively more expensive public transport (good L3).	15	**Level 1** = Identification of possible factors **Level 2** = Identification AND explanation of factors **Level 3** = Analysis of HOW each factor results in a rise in car use A Level 2 answer will simply describe factors which may have caused a rise in car use whilst a Level 3 answer will clearly analyse how each factor has caused use of cars to rise using economic theory. *One obvious way of analysing these factors is by using a relevant demand diagram BUT the factor must be clearly identified (eg <u>higher</u> incomes OR an <u>improvement</u> in tastes and fashion) BUT <u>S&D can only gain basic L3</u>*	**Level 3: (9–15 marks)** Analysis of HOW factor results in a rise in car use. 13–15 marks: Very good analysis: good analysis of two or more factors 11–12 marks: Good analysis: Good analysis of one factor OR basic analysis of two. 9–10 marks: Basic analysis: Basic analysis of one factor 9 marks: an analytical answer containing no reference at all to car use. **Level 2: (5–8 marks)** For an application of knowledge and under-standing of different factors: 7–8 marks Good application: 2 or more factors identified and explained with reference to car use 5–6 marks Basic application: 1 factor identified and explained with reference to car use. 5 marks: Application but lacking any relevant application to car use.

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Question			Answer	Marks	Guidance	
					Content	Levels of response
			Increased incomes (L1) have occurred over the past decade meaning that people are more able to afford cars (L2 only). This can be illustrated by a rightwards shift of the demand curve (basic L3) OR given that cars are 'normal' goods (basic L3) and therefore have positive income elasticity of demand, a rise in income will lead to higher demand for the product (good L3). Increased price of substitute goods (L1). Bus prices have risen is real terms (L2) leading to people switching/changing to car use (basic L3) as it is a cheaper alternative OR a diagram showing a right-wards shift of the demand curve for cars (basic L3). Explanation of this in terms of POSITIVE cross elasticity of demand for cars with respect to the price of buses (good L3). Increased population (L1) means that there will be more people undertaking transport journeys (L2 only). This shifts the demand curve to the right (basic L3) OR the <u>derived demand</u> for transport rises and there is greater demand for cars (basic L3). The <u>derived demand</u> for car use rises as more people need to travel to work or use their cars for more leisure journeys, hence the demand will be higher (good L3).		For analysis of population as a factor, there must be explicit reference to derived demand. DO NOT accept convenience unless there is specific reference to <u>increased</u> convenience as a consequence of improving the road network	**Level 1: (1–4 marks)** Knowledge & understanding in terms of simple reference to factors which may shift the demand curve. 3-4 marks: Good knowledge: two or more determinants of demand are identified. There is some reference to car use in the answer. 1-2 marks: Basic knowledge: one determinant of demand is identified OR there is a basic knowledge of what 'demand' refers to.

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Question			Answer	Marks	Guidance	
					Content	Levels of response
	(b)		Candidates will expected to produce two sided analysis of how effective road pricing is in reducing car use. **Three ways of analysing ERP include:** **A. Diagram analysis of ERP:** *'Basic analysis'*: A clearly labelled diagram with an explanation of two of the following points. *'Good analysis'*: Clearly labelled diagram with an explanation of all three points: • supply curve shifts OR higher private costs OR external costs now taken into account / internalised OR now pay the full social cost • higher equilibrium price • lower quantity OR demand **B. Written analysis of ERP:** *'Basic analysis'* must cover two of the following three points. *'Good analysis'* must cover all three points: • road pricing increases the private cost of driving OR forces drivers to internalise their external costs OR price now reflects full social cost • This will shift the supply curve left • This leads to higher market price AND lower quantity demanded.	20	NOTE: It is very important that answers focus on the question – namely, analysing how effective it is in reducing car use rather than simply analysing the general policy. **Possible judgement includes:** • The effectiveness of road pricing is entirely dependent upon whether or not an alternative exists in the form of quality public transport. If this does not exist then however accurate the level of road pricing is, it will not be effective. • The impact of ERP depends upon the level at which it is set – too low and very few people will switch from their cars • If the revenues from road pricing were hypothecated into better quality public transport then there would be an alternative available and arguably PED for car use would be more elastic. • It will be more effective if used in conjunction with other policies	**Level 4(a): (16-20 marks)** For a discussion which includes judgement. 18–20 marks: balanced discussion with good judgement. 16–17 marks: balanced discussion with weak judgement. *NOTE: to reach L4(a), balanced discussion must already be present* **Level 4(b): (11-15 marks)** For two sided discussion lacking judgement. 13–15 marks *Good analysis*: balanced discussion (this must include clear analysis of whether or not road pricing lowers demand) 11–12 marks: basic discussion where there is only basic analysis of one side of the argument. **Level 3: (5-10 marks)** One sided analysis ie analysis of whether a national road pricing system would be effective in reducing demand. 8–10 marks: clear analysis of how road

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Question			Answer	Marks	Guidance	
					Content	Levels of response
			C. Written analysis of hypothecation: Revenue raised from ERP can be used to fund improvements in public transport: • lowering fares, encouraging a shift from car to bus (basic L3) **OR** • improving quality of services, encourages shift from car to bus (basic L3) If BOTH factors considered, good L3. **Possible analysis of drawbacks:** • Road pricing must be set accurately equal to external costs • Level of charge: if too low it will have minimal impact on demand (especially on high income groups) • Possible displacement on to smaller roads which are not covered by road pricing (eg 'B' roads). Unless road pricing is totally comprehensive car journeys will therefore not be reduced but simply moved elsewhere. • Inelastic demand for car use: with inelastic PED (eg commuters) and therefore road pricing will have very little impact on their demand. • Inelastic YED of alternatives such as buses means that as household incomes rise, people will switch away from public transport. There-fore road pricing will not result in overall levels of car usage falling (unless set at very high levels?). • Hypothecation may involve a time lag (L2) and a delay before any reduction in car use occurs (L3)		Answers must focus upon the question set – namely, analysing how effective ERP is at reducing car use. **Therefore DO NOT accept criticisms of ERP in terms of:** • the cost of setting up ERP • political problems • the inflationary impact of ERP / reduced international competitiveness • possible civil liberties issues. • The regressive nature of charges **Level 2 answers:** Will contain simple application of knowledge, such as: "ERP raises the price of driving and lowers demand". OR refer to successful examples of ERP **Level 1 answers:** Contain knowledge of what ERP is OR exactly what effect such a scheme will have	pricing may reduce demand. 5–7 marks: basic analysis of how road pricing may not reduce demand. OR analysis of road pricing only without reference to car demand. **Level 2: (3–4 marks)** Answers in this level will simply provide examples of where road pricing has been used. **Level 1: (1–2 marks)** Answers in this level will simply state what is meant by road pricing.

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Tuesday 12 June 2012 – Afternoon

A2 GCE ECONOMICS

F584/01 Transport Economics

F5301061 2

Candidates answer on the Question Paper.

OCR supplied materials:
None

Other materials required:
- Calculators may be used

Duration: 2 hours

F 5 8 4 0 1

Candidate forename		Candidate surname	

Centre number						Candidate number				

INSTRUCTIONS TO CANDIDATES

- Write your name, centre number and candidate number in the boxes above. Please write clearly and in capital letters.
- Use black ink. HB pencil may be used for graphs and diagrams only.
- Answer Section A and **one** question from Section B.
- Read each question carefully. Make sure you know what you have to do before starting your answer.
- Do **not** write in the bar codes.
- The spaces should be sufficient for your answers but if you require more space use the lined pages at the end of this booklet and number your answers carefully.

INFORMATION FOR CANDIDATES

- The number of marks is given in brackets **[ ]** at the end of each question or part question.
- The total number of marks for this paper is **60**.
- The quality of your written communication will be taken into account in the marking of your answer to Section B.
- This document consists of **20** pages. Any blank pages are indicated.

A calculator may be used for this paper

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British Airways moves a step closer to transatlantic deal

British Airways (BA) has taken a significant step towards securing an alliance with American Airlines after the European Commission approved the deal.

If the three way tie up with American Airlines and Spanish airline Iberia is agreed by the US Department of Transport, the airlines will, in effect, be allowed to agree on fares and scheduling between Europe and the USA.

Willie Walsh, BA Chief Executive, said the route between Heathrow and the USA is already competitive thanks to the 'Open Skies' deal between the European Union (EU) and the USA which has opened up the transatlantic market to more competition. Virgin Atlantic, which has emblazoned its aircraft with slogans protesting against the deal, said it would continue to fight the proposal. Sir Richard Branson said, "We have fought this monster monopoly for the past 13 years and are still resolute in our belief that this decision is shameful and consumers will suffer as a result".

Analysts and investors believe that the deal will lead to lower costs at BA because combined scheduling will allow it to fly fewer planes, and the three airlines will not have to duplicate sales teams for customers. Douglas McNeill, analyst at Charles Stanley Securities, said the main benefits would not come from price increases. "It is not about jacking up fares. The airlines can probably achieve all they want from eliminating cost overlaps", he said.

Fig. 1 shows the number of seat kilometres sold by the main UK airlines in 2009.

Fig. 1: Size of UK airlines by seat kilometres used (2009)

	Million-seat kilometres	Percentage of total
British Airways	111 327	37.4
Easyjet Airline	45 236	15.2
Virgin Atlantic	39 282	13.2
Thomson Airways	32 650	11.0
Thomas Cook Airlines	27 154	9.1
Monarch Airlines	15 712	5.3
BMI Group	10 171	3.4

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Section A

Answer **all** questions from this section.

1 (a) (i) What is meant by a 'five firm concentration ratio'?

.....

.....

..... **[1]**

(ii) Calculate the five firm concentration ratio in the UK airline market in 2009.
Give your answer to one decimal place.

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..... **[1]**

(iii) Explain the impact on market concentration of a merger between Thomson Airways and Thomas Cook Airlines.

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..... **[2]**

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(b) (i) Explain the difference between fixed and variable costs.

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..... **[2]**

(ii) Identify **one** fixed and **one** variable cost faced by an airline such as British Airways.

Fixed cost: .....

.....

Variable cost: .....

..... **[2]**

(c) (i) State and explain **two** possible economies of scale which could be gained from the merger between BA and Iberia.

1. .....

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2. .....

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..... **[4]**

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(ii) Comment on whether an airline may suffer from diseconomies of scale as it expands.

.... **[5]**

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(d) Discuss the extent to which deregulation, such as the EU 'Open Skies' policy, has been beneficial in transport markets.

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..... **[8]**

Section A Total: [25 marks]

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Section B

Answer **one** question from this section.

2 **(a)** Analyse the methods used by economists to place monetary values on different externalities, such as noise and congestion, arising from increased transport use. **[15]**

(b) Discuss the effectiveness of subsidising public transport in overcoming market failure in transport markets. **[20]**

3 **(a)** Analyse the characteristics of monopolistic competition. **[15]**

(b) Discuss the extent to which monopoly provision of transport services is beneficial to producers and consumers. **[20]**

4 **(a)** Analyse why the demand for passenger and freight transport is a derived demand. **[15]**

(b) Discuss the problems of forecasting future trends in transport markets. **[20]**

Section B Total: [35 marks]

Paper Total: [60 marks]

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Section B

Question No. .....

Start your answer to part **(a)** here

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Start your answer to part **(b)** here

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Additional answer space. If you use this space, please number your answers carefully.

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Advanced GCE

Unit **F584:** Transport Economics

Mark Scheme for June 2012

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Annotation	Meaning
	Unclear
	Benefit of Doubt
	Cross
	Effective Evaluation
	Irrelevant
	Level 1
	Level 2
	Level 3
	Level 4
	Not answered question
	Noted but no credit given
	Too Vague
	Tick
	Development of point

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Question			Answer	Marks	Guidance
1	(a)	(i)	For one mark. One mark for stating that a concentration ratio is: • the proportion/percentage of industry output accounted for by the five largest firms • the total level of output in the hands of the five largest operators • the total output/market share of the top five firms in the industry • the proportion/percentage of the total market shared between the largest 5 firms	1	NOTE: to gain the mark, there MUST be clear reference to the fact that it involves the five largest firms
		(ii)	One mark for 85.9% (accept 85.9 without %).	1	DO NOT accept 85% or 86%.
		(iii)	One mark for an explicit statement that there is increased market concentration OR an increased concentration ratio (accept "more concentrated"). One further mark for: • the new five firm concentration ratio would be 91.2% OR it rises by 5.3% • explicit recognition that there is <u>less competition</u> in the industry (do not accept "fewer firms") • the four firm concentration ratio is now 85.9% OR the same market share will be held by a smaller number of firms	2	This is a 1+1 question. For first mark, DO NOT accept vague references to "stronger" market concentration.
	(b)	(i)	Up to two marks One mark for fixed costs are those which do not vary as the level of output changes. One mark for variable costs are those which change with/are directly related to the level of output	2	No marks for examples of fixed and variable costs. Do not accept reference to "demand" in definitions – must refer to output OR production OR supply.

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		(ii)	One mark for each explanation, up to a maximum of two marks. Accept any relevant examples, such as: Fixed costs: insurance, depreciation, costs of leasing planes / cost of planes, vehicle excise duty, salaries, rent of airport hangars (accept "rent" or "rent of buildings"), cost of landing slots, interest on loans, research & development Variable costs: fuel, running costs/maintenance costs, wear and tear/tyres, wages, electricity, landing fees/charges. Accept cost of meals/catering.	2	Accept salaries (FC) or wages (VC) – do not reward simple statements such as "staff costs" or "labour costs".
	(c)	(i)	One mark for each correct identification up to a maximum of two marks, plus a further one mark for each explanation. **Award two marks for explicit identification:** • financial • commercial/purchasing/bulk buying • technical • risk bearing • marketing economies • managerial. **Award two further marks for explanation** which EITHER • makes clear ref. to falling average/unit costs **OR** • contains explicit reference to the airline industry For example: "The merged firm benefits from bulk buying (1) which means that as they buy more products, their average costs of production will fall (1)" **OR** "After the merger, airlines will be able to buy in larger quantities and hence benefit from commercial economies of scale (1). As they are buying more aircraft, they will receive discounts from plane manufacturers (1)"	4	This is a 2+2 question. The explanation/development marks can only be gained where **ONE** of two factors is included in the explanation: • that average (or unit) costs will fall **OR** • there is clear development of the economy of scale with explicit reference to the airline industry, explaining why savings will be made by BA/Iberia. NOTE: there must be application to the airline industry here. NOTE: if the same explanation is used twice, for example, falling AC's, only reward 1 explanation mark.

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		(ii)	Up to two marks for analysis of why diseconomies of scale MAY occur: One mark for basic recognition that expansion may result in higher average/unit costs (accept an accurate diagram showing increased AC) One mark (max) for identification of relevant diseconomies: • managerial diseconomies • control issues • co-ordination issues • communication issues • alienation of the workforce/loss of motivation. One mark for development of this example, for example: • it becomes more difficult to monitor the work of employees and <u>productivity may fall</u> • it is more difficult to co-ordinate all aspects of production – hence the firm <u>incurs extra costs</u>. Two marks maximum for analysing why diseconomies arise. Up to two marks for analysis of why diseconomies of scale MAY NOT arise: • an explicit statement that firms may, in fact, gain economies of scale OR an example (1 mark max.) • it depends where the firm is operating in relation to the minimum efficient scale (OR in relation to where MC=AC) • it depends upon where the firm is starting from • it depends upon the scale of the expansion. • the airline industry has huge fixed costs. Therefore EOS are likely to be huge and expansion is likely to result in further EOS, not DOS. **One final mark is available for a clear conclusion which answers the question directly** (see Guidance)	5	Up to five marks are available: This is a 2+3 question BUT the final evaluative mark is reserved for an evaluative conclusion or judgement being offered. An entirely one sided answer can gain a maximum of two marks only. **Conclusion:** The final mark can be gained for any simple conclusion which follows two sided analysis. This mark cannot be rewarded for simple repetition of previous argument. For example: • as it expands it will (will not) suffer from DOS. • the answer identifies what the crucial factor will be in determining whether or not the firm incurs DOS. **Please use ✔+ to indicate where an evaluative conclusion or judgement has been offered.**

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Question	Answer	Marks	Guidance
(d)	**Up to three marks are available for relevant analysis of why deregulation may have been beneficial:** <u>Reward basic statements which are not developed eg: deregulation has resulted in</u>: • increased choice for consumers (1) • more flights OR new routes offered by firms(1) • markets have become more contestable OR new firms entered the market (1) OR supply increased. • lower costs (or AC's) of production (1) • less chance of there being monopoly (1). <u>Reward up to three marks for developed statements such as</u>: Deregulation should stimulate greater competition (1): • which results in greater price competition (1) as firms wish to gain sales and market share by selling products at the lowest possible price (1) • non-price competition also results (1) with firms trying to gain custom by offering better quality services/innovative products (1). Deregulation results in greater economic OR productive OR allocative efficiency (1): • firms have to be more productively efficient in order to lower AC's and prices (1) • firms have to be allocatively efficient ie produce those goods and services which people want. • Lowers X-inefficiency as firms now have no minimise costs – no scope for complacency. Lower regulations/deregulation will reduce costs of production (1) which: • increases market supply (1) ACCEPT DIAGRAM • in turn, reduces equilibrium price (1)	8	Up to eight marks are available in total for this question: This is a 3+5 question but the last two marks are only awarded where a clear evaluative conclusion or summary is offered. THEREFORE an entirely one sided answer which only addresses the benefits (or costs) of deregulation will only gain a maximum of three marks. The answer DOES NOT have to be based upon deregulation of the air industry – accept analysis of bus deregulation. There are no marks available for a definition of deregulation. (Accept relevant theory of the firm diagrams showing a shift from monopoly to competitive market structures as long as there is explanation in terms of the gains from increased efficiency OR lower prices).

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Question			Answer	Marks	Guidance
			Up to three marks are available for analysis of why deregulation MAY NOT have been beneficial: • increased competition is not guaranteed and often deregulation results in a private rather than a public sector monopoly OR oligopoly/duopoly results. • collusion is possible with private sector firms working together to gain monopoly power. • anti-competitive behaviour (eg predatory pricing): incumbents maintain advantages over potential entrants (eg huge EOS) OR alliances may form. • deregulation has resulted in the growth of airlines and flights – hence an increase in negative externalities/ market failure/global warming. • cost cutting may lead to safety risks/reduce quality • deregulation has often resulted in the duplication of services on existing, profitable routes – possible allocative inefficiency/waste of scarce resources OR spare capacity results • by involving more firms in the industry, it is arguably harder for the government to co-ordinate a national transport solution to congestion. • other barriers to entry (apart from regulation) may remain eg high sunk costs OR lack of landing slots • lower profits…lower R&D…dynamic efficiency loss **Two final marks are available for a clear conclusion/ evaluative judgement:** 1 mark: basic concl: deregulation has/hasn't been success 2 marks for a clear evaluative conclusion. For example: • it depends upon the extent to which barriers to entry have been removed in reality OR it depends upon the size of any increase in competition. • it depends upon which transport market is being looked at. Arguably, airline deregulation has been more successful than buses. • depends upon if looking at SR or LR here.		One drawback which is well developed can gain up to three marks. DO NOT reward the idea that barriers still remain in markets unless these barriers have been created by deregulation. NOTE: in order to gain the final two marks (for an evaluative conclusion), clear, two sided analysis must already be offered. Please use  to indicate where an evaluative conclusion or judgement has been rewarded marks.

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Question			Answer	Marks	Guidance	
					Content	**Levels of response**
2	(a)		Candidates analyse different methods used to identify monetary values (NOTE: explicit ref. to measuring noise & congestion NOT required). **Relevant <u>methods</u> include:** • shadow pricing • increased user costs • compensation • cost incurred to local residents • revealed preference • lost output. **ACCEPT CBA APPROACH** (see overleaf) **Relevant <u>analysis</u> includes:** 1. <u>Use shadow pricing</u> (L1) • to measure lost output, use monetary value of working hours lost (L2). Multiply average wage by the number of working hours lost (basic L3) eg average wage £10, 1000 working hours lost externality is £10,000 (good L3) • OR NHS cost of treating accident victims(L2) increased salaries/ambulance costs incurred by the NHS (basic L3) eg 2 additional ambulance crews @ £1000 an hour (good L3) 2. <u>Increased road user costs</u> (L1). Here, use total increased costs for other road users (L2). If it costs £5 for a user to use the road at the moment but £5.05 after an additional motorist joins the road then the external cost is 5 pence (basic L3). Then multiply this by number of cars eg 1000 cars times 5 pence = £50 (good L3).	15	<u>Identification of methods = Level 1</u> (eg ”shadow pricing”) <u>Identification and explanation of methods=Level 2 </u>(eg “lost output from congestion can be measured by looking at value of time lost”) <u>Analysis of how each method is used to derive a monetary value for negative externalities = Level 3</u> For Level 3 there must be clear development of exactly HOW a monetary value could be attached. Basic analysis may involve just stating that may just use wages to value time lost OR good analysis may involve a numerical example. **Answers which are purely theoretical and lack any relevant transport application will gain marks in the bottom part of the relevant ‘band’ eg 7 rather than 8 marks.**	**Level 3 [9–15]** For clear analysis of the methods which are used to attach monetary values. 13–15: *Very good analysis*: good analysis of two or more methods. 11-12: *Good analysis*: Good analysis of one method OR basic analysis of two. 9–10: *Basic analysis*: basic analysis of one method. **Level 2 [5–8 marks]** For an application of knowledge and understanding of the methods used to attach monetary values. 7-8 marks: *Good application*: two or more methods are identified and explained. 5-6 marks: *Basic application*: one method identified and explained. Answers in this level identify different methods but fail to analyse how these work. Eg identifying shadow pricing <u>and</u> explaining what this is rather than developing how it can be used to place a monetary value on externalities.

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			3. Compensation OR the cost of removing the problem (L1) eg the cost of compensating for pollution OR cost of removing traffic noise (L2). This could be done by looking at the cost of triple glazing (basic L3) eg the cost of glazing multiplied by number of properties. If an estate suffers from noise pollution then if 100 houses need £5000 of double glazing then the value of the externality is £500,000 (good L3). 4. Cost to local residents (L1) Change in local house prices due to blight/pollution (L2). Use fall in house prices (basic L3) OR multiply drop in house prices by number of houses (basic L3) eg if one house drops in value from £250,000 to £180,000 then externality is £70,000 (good L3) 5. Lost output (L1) could be used as a measure of loss of life. In other words, placing a cash value on the output lost (L2). This could be measured by the earnings which would have been gained in that lifetime (basic L3) ie the number of years multiplied by a worker's average wage/salary (good L3). 6. Revealed preference (L1) could be used as it shows how much people would be willing to pay to avoid the externality (L2) eg costs which local residents would pay to remove the noise pollution (basic L3) OR how much you would pay to prevent something from happening (basic L3). This could be done through surveying households and deriving average data (good L3).		**CBA approach 8 marks maximum:** **Level 2:** 7-8 marks: Good application of CBA process with explicit recognition of the need to attach monetary values to externalities to calculate SC/SB or NPV. 5-6 marks: Basic application of CBA: explicit recognition of attaching monetary values to externalities but no reference to SC/SB/NPV. **Level 1:** 3-4 marks: Clear knowledge of CBA ie calculates SC and SB but no reference at all to attaching monetary values 1-2 marks: Basic knowledge of CBA ie what it is only	**Level 1 [1–4 marks]** For only knowledge and understanding of what externalities are OR for the simple identification of methods used to attach monetary values without any explanation of these. 3-4 marks: *Clear knowledge*: identifies/ names a general method of measuring externalities OR identifies two or more relevant externalities OTHER than noise and congestion. 1-2 marks: *Basic knowledge*: defines externalities OR identifies one externality arising from increased transport use. **ACCEPT ANALYSIS OF MEASURING POSITIVE EXTERNALITIES TOO:** For example, increased employment can be measured by the increased incomes/increased wages received by workers (L3)

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	(b)		To reach Level 4, two sided analysis is needed. **<u>Relevant analysis includes</u>:** **An accurate diagram showing BOTH:** • supply curve shifting to the right AND • with old and new equilibrium price and quantity fully labelled • BUT WHICH IS ALSO REFERRED TO **Written analysis in terms of BOTH:** • a subsidy lowers costs of production, therefore shifting the supply curve (or MPC) to the right • this lowers equilibrium price AND increases quantity. **For 'GOOD ANALYSIS'**, as well as the above, there also needs to be clear reference to reducing demand for car use/road use OR modal switch away from cars (accept basic idea of "moving from cars to bus"). **<u>Possible analysis of why subsidies may not be effective includes</u>:** • <u>Inelastic PED</u>: if PED <u>of public transport</u> is inelastic (as is arguably the case) then a price fall will only result in a tiny change in demand. Hence subsidies will be less effective in achieving modal switch. • <u>Possible inefficiency</u>: subsidies may encourage complacency.	20	**Level 4(a):** To reach level 4(a) there must already be 'Good discussion' present ie balanced, two sided analysis. <u>Possible judgement includes</u>: The effectiveness of a subsidy will depend upon whether or not it is used in conjunction with other policies ie as part of a wider, integrated solution to market failure. The impact depends upon the exact type of subsidy used ie fare or capital subsidy? Arguably, capital subsidies may be more effective as these may begin to change peoples' perceptions of bus travel and therefore generate greater demand. **ACCEPT diagram analysis AS LONG as there is clear explanation of the diagram offered.**	**Level 4(a) [16–20 marks]** For a discussion which includes a judgement as to the effectiveness of subsidies as a solution to market failure. Note: to reach level 4(a), balanced discussion must already be present. 18-20 marks: balanced discussion with good judgement. 16-17 marks: balanced discussion with weak judgement. **Level 4(b) [11–15 marks]** For a discussion of the effectiveness of subsidies with no judgement. Two sided economic analysis. 13-15 marks: *balanced discussion*. 11-12 marks: *basic discussion* (the analysis of one side is only basic). **Level 3 [5–10 marks]** One sided analysis of how subsidies are effective OR ineffective. 8-10 marks: *Good analysis*: one sided analysis which is nevertheless good. 5-7 marks: *Basic analysis*: one sided analysis which is only basic in nature.

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			• Use of subsidy: there is no guarantee that firms will pass on the subsidy – they may simply absorb it into increased profit (ie what is the subsidy actually used for?). • Negative YED: With rising incomes, subsidising buses may not be effective due to negative YED (buses are seen as inferior goods). As incomes rise, people will arguably shift from buses to cars – hence subsidies will be less effective. • Quality and non-price factors? If fare subsidies are used these may have no impact if what it stopping people using public transport is the ride quality – this would require capital subsidies to be used • What size should the subsidy be? If not accurately set equal to the external benefit of public transport provision, then market failure will remain as the positive externality will not be fully internalised. • Expense: the subsidy will incur a substantial cost to the government and, therefore, represents an opportunity cost. • ONLY accept explicit comparisons with other policies where BOTH: i. analysis of subsidies is already given ii. **explicit** comparison is made, directly analysing why the alternative is better.		**NOTE:** answers which lack relevant transport application will gain marks towards the bottom of the relevant band (eg 5 rather than 7 marks). **DO NOT REWARD** diagrams which show a SHIFT of the demand curve.	**Level 2 [3–4 marks]** For an application of knowledge and understanding of the impact of subsidies on market equilibrium. Answers in this level will offer simple statements, for example 'subsidies lower prices' without offering any relevant analysis of how these work. **Level 1 [1–2 marks]** For knowledge and understanding of what subsidies are.

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3	(a)		**Relevant characteristics include:** • product differentiation/non price comp • firms are price makers • a large number of firms in the market (all of which are relatively small) • low barriers to entry or low barriers to exit • supernormal profit only in the short OR only normal profit in the long run • the firm aims to profit maximise • the markets will be productive and/or allocatively inefficient • there is excess capacity in the market. **Relevant <u>analysis</u> of these could include:** Firms differentiate their products(L1) ie produce similar but slightly different products (L2) via branding/packaging/advertising (L2), to try to make their products unique. Therefore: • firms gain a small degree of market power/monopoly (L3) OR • firms face a downwards sloping demand curve (L3) • allows firms to be price makers (L3). Firms profit maximise (L1) ie produce where MC=MR (L2). Award L3 where developed with SR or LR diagram which is perfectly accurate (L3). Firms are price makers (L1). They can change prices slightly (L2). This means firms can raise prices without losing all of their customers (L3) OR it means that the demand curve faced by firms in this market is downwards sloping (L3).	15	Identification of characteristics = Level 1 Identification and explanation of characteristics = Level 2 Analysis of the consequence of each characteristic (ie how it results in monopolistic competition) = Level 3 For Level 3, there must be analysis present. In other words, there must be clear development of the consequence of the characteristic eg what it leads to OR why it results in monopolistic competition.	**Level 3 [9–15]** For a clear analysis of the characteristics of monopolistic competition. 13–15: Very good analysis: good analysis of two or more characteristics. 11-12: Good analysis: Good analysis of one characteristic OR basic analysis of two. 9–10: Basic analysis: basic analysis of one characteristic. **Level 2 [5–8 marks]** For an application of knowledge and understanding of the characteristics of monopolistic competition. 7-8 marks: Good application: two or more characteristics are identified and explained. 5-6 marks: Basic application: one characteristic identified and explained. Answers in this level will identify different characteristics but fail to analyse these. Eg identifying differentiated products and explaining this rather than analysing how it results in a monopolistically competitive market

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			A large number of firms exist (L1) eg taxi firms (L2). This results in a low concentration ratio in the industry (L3) or strong competition (L3). There are low barriers to entry (L1) as start-up costs are relatively low (L2) OR which means that firms will be able to enter the market easily (L2). This results in a large number of firms in the industry (L3) there will be many firms in the industry (L3). There are low barriers to exit (L1) eg sunk costs or advertising costs are low (L2). More firms enter the market as they know that they can recoup costs on exiting the market – hence a large number of firms in the market (L3). Firms make supernormal profit in short run (L1) this attracts new firms to the market (L2). So: • reducing supernormal profit <u>so that in the long run, only normal profit is made</u> (L3 OR • causes a leftwards shift of the D curve, reducing supernormal profit (L3) OR • causes rightwards shift of S curve reducing supernormal profit (L3) • accept perfectly accurate LR diagram as long as reduced profit referred to (L3) Productive inefficiency occurs (L1). Productive efficiency is achieved where production is at minimum AC (L2). Here, firms produce above this point – hence productively inefficient (L3). <u>Accept relevant diagram(s) here as long as explanation of output being above min. AC</u>.			**Level 1 [1–4 marks]** For only knowledge and understanding of what monopolistic competition is OR for the identification of characteristics only. 3-4 marks: *Clear knowledge*: identifies two or more characteristics. 1-2 marks: *Basic knowledge*: identifies one characteristic OR basic definition of monopolistic competition only.

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	(b)		To reach Level 4, analysis of both sides of the issue is needed **Relevant analysis of benefits includes:** Producers gain from economies of scale (L2) as when they produce at a larger level of output they can benefit from bulk buying and hence benefit from lower average costs (L3). Accept analysis of natural monopoly. Producers benefit from higher prices (L2) which increases Producer Surplus (L3). Accept relevant monopoly diagram which is explained for analysis of this (L3). Consumers benefit from lower prices (L2). This is because firms may gain economies of scale (basic L3) such as bulk buying power and hence benefits from lower AC's (good L3) OR lower price increases consumer surplus (L3). Monopoly providers benefit from supernormal profits (L2) OR profits can be used to increase R&D/innovation (L2). Firms can therefore gain increased sales (L3) OR market share (L3) OR lower costs from innovation (L3) OR dynamic efficiency (L3). Consumers benefit from high profits/R&D (L2) as they can buy innovative, new services (L3) OR gain lower prices (L3). Monopoly provides the potential for a more integrated system (L2). This helps to correct market failure by reducing neg externalities (L3) OR helps to reduce impact on third parties (L3).	20	**Level 4(a):** To reach level 4(a) there must already be '*Balanced discussion'* present ie good, two sided analysis. **Possible judgement includes:** It depends upon how well (and effectively) it is regulated by the Competition Commission More important is perhaps the level of contestability rather than competition. If a monopoly fears that a new firm may enter the market and compete away its profit, it may well alter its behaviour so that it is more beneficial to consumers. It depends upon what the monopolist's objective is **Answers which lack any reference to producers or consumers gain 12 marks maximum**	**Level 4(a) [16–20 marks]** For a discussion which includes a judgement as to whether or not monopoly is beneficial. Note: to reach level 4(a), balanced discussion must already be present. 18-20 marks: balanced discussion with good judgement. Answers must have good analysis of monopoly being good AND bad. 16-17 marks: balanced discussion with weak judgement. Answers must have good analysis of monopoly being good AND bad. **Level 4(b) [11–15 marks]** For a discussion of whether or not monopoly is beneficial. Two sided economic analysis. 13-15 marks: *balanced discussion*. There is good analysis of both why monopoly is good AND good analysis of why monopoly is bad. Answers which ONLY discuss producers OR consumers receive 13 marks. 11-12 marks: *basic discussion*. There is two sided analysis but at least one side contains only basic analysis.

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			Relevant analysis of why monopoly may NOT be beneficial includes: Monopoly raises price OR price discriminates (L2). Consumers worse off, with reduced consumer surplus (L3) OR modal switch and market failure occurs (L3). Accept diagram comparing monopoly to competitive market (L3). Monopoly providers of transport services will be both productively & allocatively inefficient (L2). This can be analysed by developing: • written explanation that monopoly is allocatively inefficient as P>MC (L3) OR • written explanation that monopoly is productively inefficient as it does not produce at minimum AC (L3) • an accurate monopoly diagram, clearly explained in terms of inefficiency (L3). Monopolies may ignore external costs (L2) OR external benefits (L2) OR reduce service provision (L2). Consumers will be worse off as externalities result in allocative inefficiency (L3) Monopoly bad for consumers as it reduces choice (L2) with only one firm in the industry. The firm establishes large barriers to entry, stopping other firms entering the industry. (L3) Monopolies may incur diseconomies of scale (L2) by producing larger output eg problems of control, co-ordination and communication <u>and hence incur higher AC's</u> (L3) OR firms produce beyond minimum AC/the MES (L3).		Answers lacking ANY transport application will gain marks towards the bottom of the band eg 8 marks rather than 10.	**Level 3 [5–10 marks]** One sided analysis of whether monopoly is OR is not beneficial. <u>8-10 marks: *Good analysis*</u>: a completely one sided answer with good analysis of EITHER benefits OR costs of monopoly. Answers which ONLY discuss producers OR consumers will receive 8 marks. <u>5-7 marks: *Basic analysis*</u>: a completely one sided answer which contains only basic analysis of EITHER benefits OR costs. Answers which ONLY discuss producers OR consumers will receive 5 marks. **Level 2 [3–4 marks]** For an application of knowledge and understanding of impact of monopoly. Answers in this level will offer simple statements, eg 'monopolies can lead to higher prices' OR 'monopoly can benefit from economies of scale' without offering any relevant analysis of this. **Level 1 [1–2 marks]** For knowledge and understanding of what monopoly is.

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4	(a)		**<u>Relevant factors determining PASSENGER transport include</u>:** Passenger transport is a 'derived demand' - it depends upon people: • taking holidays (L2) • travelling for leisure purposes (L2) • shopping (L2) • in employment/going to work/taking business trips (L2) • undertaking general needs as part of day to day living (L2). **Relevant analysis of these include:** People use transport to travel to work/get to work on time rather than just for the activity itself (basic L3). As employment rises, there is a rise in number of commuters and increasing demand for passenger transport (good L3). People use transport to get to work (L2). If more people want to commute to work then demand for transport increases (basic L3). People taking holidays demand transport to get to their destination rather than just for transport itself (basic L3) and hence the greater the demand for passenger transport services to get people to their holiday destinations (good L3). People demand transport to go shopping rather than just for the service itself (basic L3). The more people shopping, the greater the demand for passenger transport (good L3). (NOTE: Accept relevant analysis showing increased demand for holidays/leisure pursuits)	15	**Derived demand is "demand that depends upon the final output that is produced" OR "where demand for one item depends upon the demand for another item".** Definition of derived demand = Level 1 Identification and explanation of factors which determine the demand for passenger and freight services = Level 2 Analysis of why these factors result in higher demand for passenger and freight services = Level 3 For Level 3, there must be analysis present. In other words, there must be clear development of why there will be (higher or lower) demand for passenger and freight transport.	**Level 3 [9–15 marks]** For clear analysis of why BOTH passenger AND freight demand are 'derived' demands. 13–15: *Very good analysis*: good analysis of BOTH passenger and freight demand. 11-12: *Good analysis*: Good analysis of one of passenger/freight demand OR basic analysis of both of these. 9–10: *Basic analysis*: basic analysis of EITHER freight or passenger demand. **Level 2 [5–8 marks]** For an application of knowledge and understanding of derived demand. 7-8 marks: *Good application*: There is relevant explanation of the factors determining why BOTH passenger AND freight demand have derived demand. 5-6 marks: *Basic application*: There is some explanation of the factors determining why EITHER passenger OR freight demand has derived demand

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			<u>Relevant factors determining FREIGHT transport include</u>: The demand for freight transport is a 'derived' demand as it depends upon: • the levels of economic activity in the economy (L2) ie GDP (L2) • the level of trade between countries (L2) • the demand for the firm's products (L2) • the number of firms sourcing raw materials from great distances (L2). **Relevant analysis of these include:** This is because as goods are demanded by consumers, they need to be transported (basic L3). Hence as economic growth increases, firms need to deliver more goods and services and hence there is an increase in demand for freight services (good L3). This is because as firms need to buy raw materials they will demand freight transport in order to supply raw materials (basic L3). With increased economic activity, there is greater demand for goods and services throughout the economy and therefore increased demand for freight transport to deliver raw materials to firms to produce these (good L3). Firms demand freight transport not because they like it but because they need to transport finished goods to market (basic L3).			Answers in Level 2 will explain why there is derived demand BUT NOT analyse it. For example: "The demand for passenger services depends upon the number of people going on holiday or the number of people commuting to work" will gain L2 (6) as whilst the demand for passenger services is explained it is not analysed. **Level 1 [1–4 marks]** For knowledge and understanding of what derived demand is. 3-4 marks: *Clear knowledge*: A clear/ accurate definition of derived demand eg "Demand that depends upon the final output that is produced OR where demand for one item depends upon the demand for another item" 1-2 marks: *Basic knowledge*: An answer which gives a basic list of what factors determine the demand for passenger and/or freight transport.

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Question			Answer	Marks	Guidance	
					Content	**Levels of response**
	(b)		Candidates should analyse forecasts are made before analysing limitations of such methods. **Identification of relevant factors used in forecasting include:** • use of recent and forecasted GDP data/ disposable incomes • fuel prices/price of complementary goods • price of substitute modes (eg to forecast car demand need price of buses) • population growth • changes in future tax rates • car ownership/number of license holders • future events (eg Olympic games) • industrial output • trade data regarding the level of imports into the country • past data / past trends • accept reference to the 'Delphi' technique. **Analysis of relevant factors used in forecasting include:** GDP data is used to forecast transport trends (L2). Higher levels of economic output will increase demand for transport services (basic L3). This is because more goods need to be transported around the country and hence there is greater demand for haulage firms' transport services (good L3). Likewise, lower GDP will result in less goods being transported – hence lower demand for transport services (L3). Population data will also be used by the	20	**Level 4(a):** To reach level 4(a) there must already be 'Balanced discussion' present ie good, two sided analysis. **Possible judgement includes:** Ultimately the success of forecasting depends upon the accuracy of the information put in to the system in the first place. Inaccurate data in=incorrect forecasts. Despite the problems which forecasting has, this is so important in developing transport planning that any forecasts are better than none. Hence whilst imperfect they still fulfil a vital role in government transport policy.	**Level 4(a) [16–20 marks]** For a discussion which includes a judgement as to the problems incurred in deriving transport forecasts. *Note: to reach level 4(a), balanced discussion must already be present.* 18-20 marks: balanced discussion with good judgement. 16-17 marks: balanced discussion with weak judgement. **Level 4(b) [11–15 marks]** For a discussion of the problems of undertaking transport forecasts. 13-15 marks: balanced discussion. 11-12 marks: basic discussion (the analysis of one side is only basic).

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Question			Answer	Marks	Guidance	
					Content	Levels of response
			government when calculating forecasts (L2). The more people, the more cars will be used/ needed (basic L3). With more people, there will be more people commuting and travelling for leisure – hence higher demand (good L3). Price of substitute modes of transport (L2). If forecasting demand for cars, we need data on price of buses as a substitute mode as if bus fares rise, more people may use cars (L3) Past data/trends can be used (L2) in order to extrapolate these trends in to the future (basic L3). **Relevant analysis of the limitations include:** • Estimates: the forecasts are only ever estimates (L2) OR are often based upon estimated data (eg future GDP) (L2). These forecasts are unreliable and may be wrong (basic level 3) – hence any policy based entirely on such forecasts could therefore be invalid (good L3). • Uncertainty: the volatility of some of these variables also adds to their inaccuracy (L2). For example, oil and fuel prices have been highly volatile over the last few years and, therefore, any forecasts based upon this data may only be accurate in the very short term (L3). • Extrapolation: using past data/trends can be a problem as the more we extrapolate in to the future the greater the possibility of errors creeping in. (L3)		**For limitations of forecasting**, award L2 where any point (from the left hand side) is identified. ANALYSIS of limitations: Analysis of limitations could be achieved by developing consequences of incorrect forecasts. For example: i. Stating that forecasts may well be incorrect/skewed/ inaccurate (basic Level 3) OR ii. Incorrect forecasts result in govts taking the wrong transport decisions OR iii. Incorrect forecasts result in firms ending up with too many goods stockpiled.	**Level 3 [5–10 marks]** One sided analysis of how forecasting is undertaken OR the problems of it. 8-10 marks: *Good analysis*: one sided analysis which is nevertheless good. 5-7 marks: *Basic analysis*: one sided analysis which is only basic in nature. **Level 2 [3–4 marks]** For an application of knowledge and understanding of transport forecasting. Answers in this level will offer simple statements, for example 'forecasting may be difficult as events change/we are dealing with uncertainties' without offering any relevant analysis of this. **Level 1 [1–2 marks]** For knowledge and understanding of what forecasting is.

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Question			Answer	Marks	Guidance	
					Content	Levels of response
			• Relevant problems with 'Delphi' technique include: who selects the experts in the first place, possible bias from these experts (due to links with companies) and also how to regulate this so that those who argue most fiercely don't dominate and influence the forecast unduly. • Assumptions of causality: forecasts make assumptions as to patterns of causality (L2) and these may be wrong – hence the forecasts will also be wrong too (L3). • Surveys: these may be inaccurate or skewed (L2). If surveys are based upon unrepresentative data they will produce incorrect forecasts of demand and hence the forecasts will be inaccurate. (L3). • Cost: data may be expensive/time consuming to collect and process (L2). To gain accurate and reliable forecasts may be very expensive (L3). • Uncertainty of government policy (L2). If the govt changes policy (eg subsidies) then demand for different modes changes (L3).		Answers lacking ANY transport application will gain marks towards the bottom of the band eg 8 marks rather than 10.	

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Monday 23 January 2012 – Afternoon

A2 GCE ECONOMICS

F584/01 Transport Economics

Candidates answer on the Question Paper.

OCR supplied materials:
None

Other materials required:
- Calculators may be used

Duration: 2 hours

Candidate forename		Candidate surname	

Centre number						Candidate number				

INSTRUCTIONS TO CANDIDATES

- Write your name, centre number and candidate number in the boxes above. Please write clearly and in capital letters.
- Use black ink. HB pencil may be used for graphs and diagrams only.
- Answer Section A and **one** question from Section B.
- Read each question carefully. Make sure you know what you have to do before starting your answer.
- Do **not** write in the bar codes.
- The spaces should be sufficient for your answers but if you require more space use the lined pages at the end of this booklet and number your answers carefully.

INFORMATION FOR CANDIDATES

- The number of marks is given in brackets **[ ]** at the end of each question or part question.
- The total number of marks for this paper is **60**.
- The quality of your written communication will be taken into account in the marking of your answer to Section B.
- This document consists of **20** pages. Any blank pages are indicated.

A calculator may be used for this paper

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Section A

Answer **all** questions.

Full steam ahead for UK train operators?

In the 1980s and 1990s UK governments increased the role of the private sector, through policies such as privatisation and deregulation. These were key policy weapons in making public transport alternatives such as buses and trains more attractive to road users.

The 1990s saw the privatisation of British Rail. The first franchises were awarded to private train operating companies (T.O.C.s) in 1994. The impact of this change continues to be much debated by economists. However, the overall growth in demand for rail travel is beyond doubt, as the following article highlights.

'Demand for rail travel returns to pre-recession levels'

A significant increase in demand for rail travel has seen a return to growth in passenger journeys not witnessed since before the recession. As Fig. 1 below shows, the fourth quarter of 2009 marked a turning point when passenger journeys once again began to grow. Overall, there are now over a billion passenger journeys made on the railways every year, a rise of 60% since privatisation in the mid 1990s.

Michael Roberts, Chief Executive of the Association of Train Operating Companies (A.T.O.C.), said, "The strong growth in passenger journeys that we have seen is hugely encouraging, both for the railway industry and for the broader economy. Passenger rail underpins economic growth, supporting thousands of industries and helping millions of people to get to work. Whilst the recession may have had a short term impact on growth, demand for rail travel is expected to double over the next 20 years, underlining the vital importance of long term investment in rolling stock and improvements to the network."

Fig. 1: Quarterly growth in rail passenger journeys (%)

2008: Quarter 1	4.4
Quarter 2	4.1
Quarter 3	2.1
Quarter 4	–0.6
2009: Quarter 1	–0.6
Quarter 2	–3.3
Quarter 3	–0.7
Quarter 4	4.4
2010: Quarter 1	6.1

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1 **(a)** Using Fig. 1,

(i) describe the change in rail passenger journeys between Quarter 1 and Quarter 3 in 2008;

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..... **[2]**

(ii) state and explain **two** possible reasons for changes in demand for rail passenger journeys between Quarter 1 and Quarter 3 in 2008.

1. .....

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2. .....

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(b) (i) Define the term 'positive externality'.

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(ii) Identify **one** possible positive externality which may arise from increased investment in the railway network and explain why it is a positive externality.

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..... **[2]**

(c) (i) State and explain **one** barrier to entry into the rail passenger market.

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..... **[2]**

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(ii) Comment on the extent to which the UK train passenger market is contestable.

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(d) Discuss whether or not rail privatisation has been beneficial to the economy.

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..... **[8]**

Section A Total: [25 marks]

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Section B

Answer **one** question.

2 **(a)** Analyse the main characteristics of an oligopolistic market. **[15]**

(b) Discuss whether or not increased competition in transport markets will increase economic efficiency. **[20]**

3 **(a)** Analyse the reasons why there has been a growth in car use in recent years. **[15]**

(b) Discuss whether road user charging would be an effective way of reducing the market failure arising from road congestion. **[20]**

4 **(a)** Analyse, using examples, what is meant by a sustainable transport policy. **[15]**

(b) Discuss the extent to which some modes of transport are more sustainable than others. **[20]**

Section B Total: [35 marks]

Paper Total: [60 marks]

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Section B

Question No. .....

Start your answer to part **(a)** here

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Start your answer to part **(b)** here

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Additional answer space. If you use this space, please number your answers carefully.

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RECOGNISING ACHIEVEMENT

GCE

Economics

Advanced GCE

Unit **F584:** Transport Economics

Mark Scheme for January 2012

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Annotations

Annotation	Meaning
	Unclear
	Benefit of Doubt
	Cross
	Effective evaluation
	Irrelevant
	Level 1
	Level 2
	Level 3
	Level 4
	Not answered question
	Noted but no credit given
	Too vague
	Tick
	Development of point

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Subject-specific Marking Instructions

Some questions may have a 'Level of Response' mark scheme. Any details about these will be in the Additional Guidance.

The following guidelines on the **quality of written communication** are embedded into the Levels of Response mark scheme used for part (b) of the essays and should be applied consistently between the different essays:

Level 4(b): Complex ideas have been expressed clearly and fluently using a style of writing which is appropriate to the complex subject matter. Sentences and paragraphs, consistently relevant, have been well structured, using appropriate technical terminology. There may be few, if any, errors of spelling, punctuation and grammar.

Level 3: Relatively straightforward ideas have been expressed with some clarity and fluency. Arguments are generally relevant, though may stray from the point of the question. There will be some errors of spelling, punctuation and grammar, but these are unlikely to be intrusive or obscure meaning.

Level 2: Some simple ideas have been expressed in an appropriate context. There are likely to be some errors of spelling, punctuation and grammar of which some may be noticeable and intrusive.

Level 1: Some simple ideas have been expressed. There will be some errors of spelling, punctuation and grammar.

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Question			Answer	Marks	Guidance
1	(a)	(i)	**Up to two marks:** 1 mark for stating that the number of rail passenger journeys increases. 1 mark for stating that it has increased <u>at a slower rate.</u> **1 mark only** for GENERAL comment eg "fall in growth" as more needed	2	Please indicate each mark using ✓ No marks for incorrect reference to the fact that numbers have fallen.
		(ii)	Up to two marks are available for identifying any relevant factor which may explain these trends (note: apply OFR here so even if the answer to a(i) is incorrect they can gain full marks on part of the question). **2 marks are available for correct identification of factors including:** • Economic slowdown/recession OR changes in disposable incomes (NOTE: GDP/household income all one factor) • Changes in employment levels (accept as separate to GDP) • Changes in rail fares/prices • Changes in price of complements (eg car parking at train stations) • Changes in the price of substitute modes of transport • Possible changes in service quality • Reliability issues and punctuality • Changes in journey times • Increased population • General changes in tastes and fashion with train travel seen as more desirable (accept reference to environmental concerns). **A further two marks are available for relevant development:** There must be clear explanation of the consequence of the factor (eg modal switch/lower demand occurs due to higher rail fares). Reward use of economic terminology (for example, development of increased incomes MAY take the form of an accurate application of positive income elasticity of demand).	4	Please indicate each correct factor with ✓ and then use a further tick where relevant explanation is being rewarded. **Accept any factor explaining EITHER a rise in train use OR a decline.** **<u>Only accept the same explanation once</u>.** The development mark should only be rewarded where the explanation is clear eg: "A change in tastes and fashion have occurred (1) resulting in people switching towards train and away from buses as the train is seen as a more reliable, better quality substitute (1)" "changes in prices of substitutes (1) mean that people switch to cheaper mode of transport (1)" "higher incomes (1) result in higher demand for trains as they are now more affordable (1)"

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Question			Answer	Marks	Guidance
	(b)	(i)	**2 marks for a clear definition such as:** A benefit gained by (OR a positive impact upon) a third party Where social benefit exceeds private benefit A positive spillover effect. A benefit to someone outside the transaction OR outside decision making **1 mark for a basic definition such as:** A benefit to someone else (no clear economics) Where one person's actions have a positive/beneficial impact upon others.	2	DO NOT reward simple reference to the fact that it is an external benefit. NOTE: NO MARKS for examples NO MARKS for SB>SC 1 mark only for "effect on 3rd party"
		(ii)	**1 mark for identification of any relevant <u>positive</u> externality eg:** • relocation of businesses to areas around transport infrastructure • reduced costs for local businesses due to increased speed • increased employment for workers • increased economic growth (accept growth of FDI) • local multiplier effects (accept benefit to local businesses) • quicker commuting journeys OR increased productivity • increased frequency of trains • improvements in quality of service OR a more reliable service **1 mark for development of why this is a positive externality eg:** • Explicit reference to it being a benefit to a third party (OR SB>PB). • Reference to the fact that this is a benefit arising to others • Benefit not included by decision makers/not included in transaction **DO NOT** REWARD basic ref to "this is a Social Benefit" or "a benefit to society"	2	Please indicate each correct factor with ✓ and then use a further tick where relevant explanation is being rewarded. DO NOT reward identification mark for reference to lower negative externalities (eg pollution/congestion falling NOT accepted)

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Question			Answer	Marks	Guidance
	(c)	(i)	**1 mark for relevant identification of an example <u>FOR RAIL</u> such as:** • The cost of the franchise OR cost of bidding for the franchise • The capital costs/set up costs involved (eg lease of rolling stock) • Sunk costs (such as advertising) • Legal barriers (regulations which have to be met) • Predatory and limit pricing (accept reference to intimidation) • The risk and uncertainty involved. • Brand loyalty of existing firms in the industry • Economies of Scale enjoyed by existing firms • Franchises (with time limits) • Imperfect information **1 mark for explanation** EITHER developing the example in more detail <u>with respect to rail</u> **OR** explaining why this factor stops other firms <u>entering market</u>	2	NOTE: NO MARKS for defining what a barrier to entry is This is a 1+1 question – please use two ticks to illustrate where the marks have been awarded. 1 mark for stating the example 1 mark for explaining it **<u>with clear reference to rail</u>** OR explaining why this leads to firms not being able to enter the market Eg "high set up costs (1) such as rolling stock (1)" gets both marks overall.

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Question			Answer	Marks	Guidance
		(ii)	Five marks are available in total for this question: **Up to 2 marks for recognising why the market MAY be contestable:** • Legally, in theory, firms have the right to compete for franchises (in other words, certain legal barriers have been removed). *Accept simple reference to "legal barriers have been removed" OR "firms are able to bid/compete for franchises" OR "lower legal barriers"* • 'Open Access' operators are able to compete in the market (against franchise holding firms) eg Grand Central and Hull trains. • Accept a general comment that <u>privatisation has removed barriers to entry</u> (and hence increased contestability) • Leasing of trains has increased contestability due to lower barriers (lower start up costs) • As brand loyalty is not an issue in the train passenger market this is one barrier which does not exist–hence the market is contestable (except in the case of Open Access market) • There are a number of competing firms (a pool of potential entrants) wanting to enter the market **Up to 2 marks for recognising why it MAY NOT be contestable with explicit reference to examples of barriers which exist:** • high set up/start up costs (including cost of meeting health and safety laws) • economies of scale of established firms • imperfect information. • a lack of slots at many main line London stations • restrictions on where passengers can be picked up/dropped off • limited availability of rolling stock • a shortage of trained drivers for companies to employ • On some routes there is not a pool of potential entrants • Possible predatory pricing/limit pricing	5	This is a 2+3 question but the final evaluative mark is reserved for an evaluative conclusion or judgement being offered. An entirely one sided answer can therefore only gain 2 marks. PLEASE add a comment at the end of the answer indicating the breakdown of marks awarded eg 1+2 or if an evaluative conclusion is offered, 1+2+1 Accept a lack of brand loyalty only as evidence of the market being contestable **Please use ✔+ to indicate where an evaluative conclusion or judgement has been rewarded.**

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Question			Answer	Marks	Guidance
			1 final mark is available for a clear summary, evaluative conclusion which answers the question directly. For example: • A simple conclusion which states that it is clear that the rail industry has limited contestability OR that contestability varies over time. • Despite the high prices, as there are so few non-franchised operators in the market, the market is clearly not very contestable • The extent to which the market is contestable depends upon how far barriers have been reduced • Level of contestability will depend upon size of incumbent firms		
	(d)		Up to eight marks are available in total for this question. **Up to 3 marks are available for relevant analysis as to how rail privatisation may have been seen as being beneficial. This may include:** • The <u>benefits</u> of increased competition (eg "increased efficiency"). Accept theoretical benefits of lower fares/increased quality. • The incentive for greater private sector investment • Reduced cost to the government (no longer nationalised) • The greater incentive to innovate in the private sector • The revenue gained by the government through the privatisation process (OR <u>theoretical</u> saving from planned reductions in subsidies) • More long term planning without government interference • Some argue that private sector management would be more motivated • Accept basic references to privatisation succeeding due to increased passenger numbers on trains (and subsequent reduced externalities/reduced pollution). Any one point which is clearly developed can gain up to 3 marks maximum. Alternatively, 3 separate but relevant points stated can gain 3 analysis marks.	8	**A 3+5 question with the last two evaluative marks being awarded for an evaluative conclusion or summary.** Please use ✔+ to indicate where an evaluative conclusion or judgement has been rewarded PLEASE add a comment at the end of the answer indicating the breakdown of marks awarded eg 3+2+0 **TWO APPROACHES TO QUESTION:** **a. Analysis of benefits and costs of privatisation** **b. Analysis of benefits of privatisation AND analysis of benefits of nationalisation (second approach = 6 max)** Therefore an answer which purely looks at the benefits of nationalisation gets 3 maximum (a one sided answer).

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Question			Answer	Marks	Guidance
			Up to 3 marks are available for discussion of possible drawbacks: • Increased competition has not necessarily occurred with a limited number of interested parties on some franchise routes. Hence oligopoly/duopoly analysis may be relevant • Any profits made now go to private sector shareholders rather than being put back in to the train network and re-invested • After privatisation, private sector firms can simply ignore the external benefits arising from rail use – allocative inefficiency arises as a positive externality is not internalised. • Accept references to the fact that private sector companies may well ignore external costs in pursuit of profit maximisation. • Privatisation has arguably broken up what was a natural monopoly – hence potentially losing economies of scale • Critics claim that privatisation has simply moved a public sector monopoly in to the private sector – hence economic inefficiency remains • Despite government hopes, substantial subsidies do remain in many franchise areas (notably the South-West) – hence cost to the govt. • Rail privatisation has arguably broken up what was a national network and hence there has been disintegration of a previous national network. This could be argued to have made the job of investing and finding a national solution to congestion much more difficult as it is harder for the government to co-ordinate such policies • Rail privatisation has seen an end to cross-subsidies and hence, theoretically, some branch lines may close down (network considerations) and loss of unprofitable rural routes • Due to a lack of competition, fares have increased in real terms (which have reduced consumer surplus/consumer welfare). • In practice, existing franchise holders have been able to establish economies of scale • When privatised was the true value of assets realised or were public assets sold off too cheaply?		

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Question			Answer	Marks	Guidance
			Each separate point of discussion, well developed, can gain up to 3 marks. **2 further marks are available for a clear conclusion or evaluative judgement:** 1 mark for a basic conclusion stating whether or not rail privatisation has been beneficial or not 2 marks for a clear evaluative conclusion suggesting what factors will determine whether or not it has been beneficial. For example: • the extent to which barriers to entry remain • the extent to which the industry is subject to control by regulators • it depends upon which sector of the rail industry is being looked at (eg freight verses passenger?) • It depends which are of the network you are looking at (ie rural areas or urban areas) • It depends upon the level of increased competition generated as a result of privatisation		

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Question			Answer	Marks	Guidance	
					Content	Levels of response
2	(a)		Candidates need to analyse the main characteristics: **Relevant characteristics include:** • High barriers to entry (including sunk costs) • Non-price competition being used • Firms face a kinked demand curve • Price rigidity/stickiness • Interdependence amongst firms/Game theory • Collusion • Not all firms aim for profit maximisation • 'L' shaped AC curve (due to nature of AVC) **Relevant <u>analysis</u> of these could include:** Oligopoly firms have high barriers to entry (L1), for example, high start-up costs OR these make it difficult for new firms to enter markets(L2). As a result, there will be fewer firms in the industry/it is dominated by a small number of firms (L3). OR that the market is more concentrated (L3) High barriers to entry exist (L1) such as economies of scale with dominant firms bulk buying etc (L2). This deters new firms from entering the market (L3) OR such barriers will drive new firms out of the market (L3) OR result in lower competition (L3) Firms face a kinked demand curve (L1). If they increase price then other firms will not follow and they will lose sales – or vice versa (L2). This results in price rigidity (L3) OR a desire not to compete on the basis of price(L3)OR collusion between firms(L3) *[Note: relevant analysis of kinked demand curve can be in terms of non-price competition occurs]*	15	Identification of characteristics = Level 1 Identification AND explanation of characteristics = Level 2 Analysis of HOW each characteristic results in an oligopoly existing = Level 3 Level 3: characteristics must be clearly analysed – <u>in other words, there must be clear development of the consequences of these characteristics</u> or how they result in an oligopoly market being formed.	**Level 3: (9–15 marks)** For a clear analysis of the characteristics of an oligopoly market 13–15: *Very good analysis*: good analysis of two or more characteristics 11–12: *Good analysis*: Good analysis of one characteristic OR basic analysis of two 9–10: *Basic analysis*: basic analysis of one characteristic **Level 2: (5–8 marks)** For an application of knowledge and understanding of the characteristics of oligopoly markets: 7–8 marks: *Good application*: 2 or more factors identified and explained. 5–6 marks: *Basic application*: 1 factor identified and explained. Answers in this level will <u>identify</u> and <u>explain</u> different characteristics but fail to analyse these in terms of why it gives rise to oligopoly. In other words, such answers describe the characteristic given rather than analysing it. As soon as two or more characteristics are identified and explained then 7 – 8 marks will be rewarded.

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Question			Answer	Marks	Guidance	
					Content	Levels of response
			Relevant analysis continued: Firms engage in non-price competition (L1), eg advertising to gain brand recognition (L2). Firms use advertising and branding in order reduce the level of competition which they face (L3) OR to attract or retain customers/market share (L3) OR because they want to avoid damaging price wars (L3) Oligopoly firms will be price makers/there can be price leadership (L1) as they do have the power to set their own prices (L2). BUT firms in this market structure are unable to gauge the reaction of competitors and hence firms in this market structure would be unlikely to compete on the basis of price (L3). Firms are interdependent OR Game Theory can be applied (L1). By this we mean that the actions of one firm may provoke counter-action by action by another OR that firms will take others' actions into account (L2). The consequence of this is that firms will be unlikely to make decisions without considering their rivals' possible response (L3) OR that firms will collude (L3). Collusion exists (L1) where firms agree either tacitly or explicitly upon price or output (L2). This restricts competition OR maximises the benefits/profits which the firm can gain in the industry (L3)			Where only one characteristic is identified and explained then 5–6 marks will be rewarded. If the characteristic is described then it will receive 6 marks. **Level 1: (1–4 marks)** For knowledge and understanding of what oligopoly is. Answers in this level will provide a basic definition in terms of oligopoly being a market structure which is dominated by a few large firms. Simple definitions will receive 1–2 marks whilst answers which provide definitions and identify characteristics will gain 3–4 marks.

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Question			Answer	Marks	Guidance	
					Content	Levels of response
	(b)		Candidates are expected to analyse how increased competition increases AND decreases efficiency. To reach L4, analysis of both sides is needed. **Relevant analysis includes:** **A. Diagrams:** Theory of the firm looking at benefits of moving from a monopoly/oligopoly type model towards a more competitive (perfectly competitive) market. (L2). Diagrams need developing in terms of **EITHER:** i. Competition leads to lower AC's and therefore productive efficiency **OR** ii. Competition leads to lower prices and hence allocative efficiency **OR** iii. Monopoly diagram developed in terms of monopoly leading to underproduction/consumption and allocative efficiency **B. Written analysis in terms of:** Productive efficiency occurs (L2) as firms want to lower AC (OR use fewer scarce resources OR produce where AC=MC) in order to lower prices (L3) OR to increase profits (L3) OR to retain/attract customers (L3) Reduced 'X' inefficiency (L2) as firms have to reduce costs in order to remain competitive (L3)	20	**Level 4(a): possible judgement includes:** The scale of increased competition: if only small then this is likely to have much less impact. Arguably it is not the level of competition but the threat of competition (and the contestability of the market) that matters. Impact varies from market to market (eg impact in a natural monopoly would be bad) **ACCEPT DIAGRAMS FOR ANALYSIS AS LONG AS THEY ARE EXPLAINED WITH REFERENCE TO ECON. EFFICIENCY.** DO NOT reward analysis marks for simple references to "increased competition makes firms lower costs OR prices". This is L2 as there is no analysis of WHY. **Level 3:** To receive higher L3 (8–10 marks) there must be clear application to transport markets in the answer.	**Level 4(a): (16–20 marks)** For a discussion which includes a judgement as to whether or not increased competition will increase economic efficiency. *NOTE: to reach L4(a) balanced discussion must already be present* 18–20 marks: balanced discussion with good judgement 16–17 marks: balanced discussion with weak judgement **Level 4(b): (11–15 marks)** For a discussion of whether or not increased competition will lead to greater economic efficiency. Two-sided economic analysis. 13–15 marks: balanced discussion with some transport application 11–12 marks: basic discussion (there analysis of one side is only basic) **Level 3: (5–10 marks)** One sided analysis: increased competition will OR will not increase economic efficiency.

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Question			Answer	Marks	Guidance	
					Content	Levels of response
			Allocative efficiency (L2) as firms sell their products at a price closer to MC (L3) OR firms wanting to produce exactly those goods or services that consumers want <u>in order to retain/attract consumers</u> (L3) Dynamic efficiency gains (L2). Firms invest in greater research and development in order to develop more innovative products OR production techniques(L3) **Possible analysis of why increased efficiency MAY NOT occur includes:** • Natural monopoly (L2) – firms no longer gain such large economies of scale OR due to high fixed costs no longer being spread out over such a large output level. • Potential loss of dynamic efficiency (L2) with lower R&D spending due to the possible loss of supernormal profits • Increased competition may result in firms trying to cut costs and hence generating more negative externalities (L2) eg pollution OR less safe modes of transport OR reduced service provision OR which involves an inefficient allocation of resources OR involves scarce resources not being allocated correctly		**Level 2:** Answers in this level will be able to recognise that increased competition results in greater productive and allocative efficiency but will fail to analyse/explain why this is the case. OR answers may just refer to competition forcing firms to lower costs of production but not analysing why. **Level 1:** Answers may identify or define productive, allocative or dynamic efficiency OR provide a general definition of what is meant by 'economic efficiency'.	8–10 marks: *Good analysis*: one sided analysis which is nevertheless good 5–7 marks: *Basic analysis*: one sided analysis which is only basic in nature **Level 2: (3–4 marks)** For an application of knowledge and understanding of the impact of increased competition on economic efficiency <u>but lacking any relevant analysis.</u> **Level 1: (1–2 marks)** For knowledge and understanding of what economic efficiency OR knowledge of what policies the government has introduced to raise competition (eg privatisation/ deregulation) NOTE: PURELY THEORETICAL ANSWERS WHICH LACK ANY TRANSPORT REFERENCE WILL GAIN A MARK AT THE BOTTOM OF THE RELEVANT <u>BAND</u>

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Question			Answer	Marks	Guidance	
					Content	Levels of response
			• Accept analysis of why decreased/less competition may increase economic efficiency ie accept analysis in favour of nationalisation. ACCEPT analysis of monopolistic competition/oligopoly NOT achieving economic efficiency AS LONG AS explanation of why allocative OR productive efficiency does not occur.			

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Question			Answer	Marks	Guidance	
					Content	**Levels of response**
3	(a)		**Relevant factors include:** • Lower prices of cars in real terms/increased competition between car manufacturers • Lower running costs in real terms • Increased price of substitute modes of transport (eg buses/trains) • Perceived unreliability of alternative modes of transport. (eg uncertainty of timetables for public transport OR lack of substitutability) • Increased real incomes (with cars seen as a 'normal good' with positive income elasticity of demand) OR increased disposable incomes • Shifts in tastes and fashion • Higher levels of car ownership • Increased population/number of households • Growth of the road network in the UK (accept analysis of this in terms of increased supply) • Increased travelling and spending on social and holiday events. As such, car use may be seen as a 'derived' demand. **Relevant analysis of these may include:** Higher demand for car use has resulted from increased disposable incomes (L1), for example over the past decades incomes, on average have risen at a greater rate than inflation (L2). This means that households have more income to spend on goods and services and therefore they may decide to buy a car rather than rely upon public transport – hence the demand for cars rises (L3) cars become more affordable (L3)	15	Candidates are expected to analyse possible reasons why there has been a rise in car use. Identification of factors = Level 1 Identification AND explanation of factors = Level 2 Analysis of HOW each factor has resulted in a rise in car use = Level 3 Level 3: each factor must be clearly analysed – <u>in other words, there must be clear development of why each factor has resulted in increased car use</u>. **ACCEPT RELEVANT S & D DIAGRAMS FOR ANALYSIS AS LONG AS EXPLAINED/REFERRED TO**	**Level 3: (9–15 marks)** For clear analysis of different reasons why demand for car use has risen. In more detail, marks will be awarded as follows: 13–15: *Very good analysis*: good analysis of two or more factors 11–12: *Good analysis*: Good analysis of one factor OR basic analysis of two 9–10: *Basic analysis*: basic analysis of one factor **Level 2: (5–8 marks)** For an application of knowledge and understanding of the reasons why car use has risen. 7–8 marks: *Good application*: 2 or more factors identified and explained. 5–6 marks: *Basic application*: 1 factor identified and explained. Answers in this level will <u>identify</u> and <u>explain</u> different factors but fail to analyse these in terms of why it results in a rise in car use. In other words, such answers <u>describe</u> the characteristic given rather than <u>analysing</u> it.

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Question			Answer	Marks	Guidance	
					Content	Levels of response
			Household incomes have risen (L1) because, over time, households have received pay rises in excess of inflation (L2). With cars being seen as 'normal goods', a rise in incomes has resulted in a rise in demand for the product (L3). Increased car use may also result from a rise in price of substitute goods (L1). For example, rail fares have risen in real terms (L2). This means that cars will be relatively cheaper and hence there will be greater demand for them as people switch from more expensive substitutes (L3). Increased population (L1) has occurred in the UK over the past 30–40 years, thus generating more people movements as there are more people travelling to work and on leisure activities (L2). As a result, car use has increased as more people need to move around the country undertaking such activities (L3). In this sense, demand for cars is derived from the demand for leisure and business (L3) Lower prices of cars (L1). This has resulted from greater competition from around the world from car manufacturers (L2). Accept development of this either in terms of simple Supply and Demand or reference to increased competition lowering equilibrium price (L3). (Accept diagram showing extension of demand for impact of lower price for L3)		Level 1: answers in this level will simply identify factors which have resulted in increased car use BUT will lack any relevant explanation/development of the factor(s) stated.	**Level 1: (1–4 marks)** For knowledge and understanding of factors that will shift the demand curve for any product.

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Question			Answer	Marks	Guidance	
					Content	Levels of response
	(b)		Candidates are expected to analyse how road user charging will successfully correct market failure before analysing the possible problems of such a policy. (Note: accept answers which develop road user charging or electronic road pricing solutions.) **Relevant analysis of how road user charging may work includes:** 1. A diagram showing supply/MPC shifting to the left AND resulting in a higher price/reduced quantity ASLONG as there is some explanation of the diagram offered. 2. Written analysis which makes BOTH the following points clear: a. consumers are forced to pay the full social costs of their actions OR pay a user charge equal to external costs OR that the charge will force consumers to internalise the external cost/negative externality) b. AND that this results in reduced consumption/a contraction of demand (and hence the market failure of overconsumption is removed) OR it results in a switch in modes of transport 3. Written analysis that the government can use revenue from charging to fund public transport: lower price of public transport substitutes will increase demand OR lower demand for car use.	20	**Level 4(a): possible judgement includes:** Road user charging will be more likely to be effective if introduced alongside other policies (eg subsidies) OR as part of an integrated solution Whether or not it succeeds ultimately depends upon whether or not there is an alternative to the car in place to begin with. **ACCEPT A DIAGRAM SHOWING A LEFTWARDS SHIFT OF SUPPLY ONLY IF EXPLAINED** **Level 3:** To receive higher L3 there must be explicit reference to congestion in the answer.	**Level 4(a): (16–20 marks)** For a discussion which includes a judgement as to whether or not road user charging will reduce congestion. Two sided analysis must also be present. *NOTE: to reach L4(a) balanced discussion must already be present* 18–20 marks: balanced discussion with good judgement 16–17 marks: balanced discussion with weak judgement **Level 4(b): (11–15 marks)** For a discussion of whether or not road user charging will reduce congestion. Accept relevant diagrams for analysis marks. 13–15 marks: balanced discussion 11–12 marks: basic discussion (where analysis of one side is only very basic) **Level 3: (5–10 marks)** For analysis of either how road user charging works OR analysis of the limitations of it. ie purely one sided answers.

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Question			Answer	Marks	Guidance	
					Content	Levels of response
			Possible analysis of the problems/limitations of such a scheme include: • What level to set the charge at? Too high and underconsumption results; too low and there will still be overconsumption. • Difficult to accurately measure external costs • Alternative needed: Road charging will only be effective if there is an alternative in place to start with. Without this, then people will not switch modes of transport and, hence, road congestion will remain • PED: With inelastic demand for car use, such charges would have minimal impact unless set at a very high level • Displacement: User charging schemes which are only in place on certain roads could result in significant displacement of traffic on to roads where charges are not incurred. In this sense it may only move the congestion from one place to another • Set up costs could be immense and, hence, there is a significant opportunity cost to the government of introducing such schemes. • Regressive nature of the user charge • ONLY accept explicit comparisons with other policies where BOTH: i. analysis of why user charging works has already been provided ii. Where explicit comparison is made clearly analysing why the alternative is better		**DO NOT reward** references to there being political problems involved in introducing such a system	8–10 marks: *Good analysis*: one sided analysis which is nevertheless good 5–7 marks: *Basic analysis*: one sided analysis which is only basic in nature **Level 2: (3–4 marks)** For an application of knowledge and understanding of what road user charging is. Answers in this level may simply provide examples of where road user charging has been used but lack relevant economic analysis of how it would work. **Level 1: (1–2 marks)** For knowledge and understanding of what road user charging is OR what market failure is

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Question			Answer	Marks	Guidance	
					Content	Levels of response
4	(a)		**<u>Three are 3 approaches to gain analysis marks</u>:** **A. A policy which achieves 'modal switch'**(analysis could include how the policy switches passengers (or freight) away from road based modes of transport) **B. A policy which reduces demand for unsustainable modes/increases demand for sustainable modes** (analysis must develop the basic idea that higher price reduces demand, for example, with reference to fewer scarce resources being used OR the mechanism by which higher price lowers demand OR an explained diagram) **C. A policy which reduces negative externalities** (analysis must include reference to reduced overconsumption OR achieving allocative efficiency) **Relevant examples include:** • Road pricing/road user charging • Subsidies to public transport operators • Government investment in public transport infrastructure • Air Passenger Duty (APD) • Differential excise duties and other green taxes (accept reference to indirect taxes) • The car scrappage/'cash for clunkers' scheme • Accept reference to HS2 if developed in terms of moving people off roads/out of cars • Tradeable permits (eg CO2 emissions from planes)	15	The classic definition of sustainability is that provided by the Brundtland Report (1987) as development "which meets the needs of the present without compromising the ability of future generations to meet their own needs". Identification of relevant policy = Level 1 Identification AND explanation of the policy = Level 2 Analysis of HOW the policy achieves modal switch/greater consumption of public transport = Level 3 For level 3, accept diagrams if explained with reference to either increased use of public transport AND/OR lower demand for cars	**Level 3: (9–15 marks)** For a clear analysis of examples of sustainable transport policies 13–15: *Very good analysis*: good analysis of two or more policies 11–12: *Good analysis*: Good analysis of one policy OR basic analysis of two 9–10: *Basic analysis*: basic analysis of one policy **Level 2: (5–8 marks)** For an application of knowledge and understanding of sustainable transport policies. 7–8 marks: *Good application*: 2 or more policies are identified and explained (BUT NOT analysed) 5–6 marks: *Basic application*: 1 policy identified and explained. Answers in this level will simply identify policies and explain how they work without reference to lowering demand for car use/increasing demand for public transport.

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Question			Answer	Marks	Guidance	
					Content	Levels of response
			Relevant analysis of these could include: Road pricing (L1). Such a policy would charge people per mile driven every mile which they drive (L2). This means that individuals will be forced to pay a price which more accurately reflects the true social costs of their actions and, therefore, the polluter pays. As such, the motorist faces a clear disincentive from making the marginal journey and may consider switching to bus/train (L3). Subsidies may also be seen as a sustainable policy (L1). These are payments made by central/local government which have the effect of lower fares on public transport (L2). By lowering the fares charged on trains and buses (and also by improving the rolling stock through the provision of capital subsidies), passengers will have a greater incentive to switch to the cheaper subsitute (L3). Air Passenger Duty/APD (L1) is a tax on plane tickets and is paid by consumers (L2). This makes consumers more aware of the true costs of their actions and will provide them with a clear incentive to change behaviour – reducing the demand for air flights and inefficient use of scarce resources (L3). Tradeable pollution permits (L1) are issued to firms to cover an identifiable level of emissions. Issued annually (and free) by govt. (L2). If firms don't need these they are able to sell them on the free market – hence low polluting firms are rewarded and high polluting firms have an incentive to reduce pollution levels. Hence reducing overconsumption. (L3).			**Level 1: (1–4 marks)** For knowledge and understanding of what sustainability is. 3–4 marks: a clear definition in line with that given in the Brundtland report – namely a definition including clear reference to scarce resources AND applying this to transport with reference to modal shift OR reducing negative externalities. OR identification of relevant policies 1–2 marks: basic definition which contains only one of the above aspects.

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Question			Answer	Marks	Guidance	
					Content	Levels of response
	(b)		Answers may take the form of analysing how car use is non-sustainable, whilst public transport use (such as trains/buses) is more sustainable. Such answers gain L4 marks by analysing both sides, ie analysing how one mode IS sustainable and ANOTHER is not. **IN GENERAL, acceptable analysis includes:** • Analysis of negative externalities OR over-consumption arising from certain modes (accept diagrams) <u>BUT must develop in terms of inefficient (or incorrect) allocation (or use) of resources</u> • Analysis of there being allocative inefficiency <u>AND incorrect use of scarce resources with different modes</u> • Analysis of how some modes can be viewed as more sustainable if government intervention means externalities are internalised (OR full social cost is paid OR external costs paid) <u>AND this ends overconsumption OR allocative inefficiency</u>. **SPECIFIC analysis of modes of transport which may be deemed to be sustainable include:** • Bus/train/low emission airplane passenger transport: due to the mass transit nature of buses, these exhibit much lower negative externalities than cars, for example. Hence there will be less market failure arising from negative externalities/a lower level of allocative efficiency will exist.	20	**Level 4(a): possible judgement includes:** Within certain modes there will be significant variation. For example, newer planes will be more fuel efficient, resulting in lower emissions and, hence, fewer negative externalities will be generated than older model planes. **TO GAIN ANALYSIS MARKS, ANSWERS MUST:** Explicitly analyse why negative externalities OR allocative inefficiency OR a waste of scarce resources does (or does not) arise	**Level 4(a): (16–20 marks)** For a discussion which includes a judgement as to the extent to which different modes of transport are sustainable. Two sided analysis must also be present. *NOTE: to reach L4(a) balanced discussion must already be present.* 18-20 marks: balanced discussion with good judgement 16–17 marks: balanced discussion with weak judgement **Level 4(b): (11–15 marks)** For a discussion of the whether or not different modes of transport are sustainable. There is evidence of economic analysis on both sides of the argument here; for example analysis of why one mode is sustainable and why another is not. 13–15 marks: balanced discussion (there is clear economic analysis on both sides) 11–12 marks: basic discussion (the analysis of one side is only basic)

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Question			Answer	Marks	Guidance	
					Content	Levels of response
			• Carrying freight by rail is more sustainable as it involves lower negative externalities and hence a more efficient allocation of scarce resources. • Carrying freight on larger vehicles (eg 44 tonnes vehicles) will reduce total emissions and therefore could be deemed to be sustainable **SPECIFIC analysis of modes of transport which may NOT be deemed to be sustainable include:** • Car use: given the significant negative externalities arising from car use there will be allocative inefficiency arising from the overconsumption of this good. • Air flights: passengers will not take in to account the full social cost of their actions and will therefore over-consume. This will result in an allocatively inefficient use of scarce resources – which is clearly not sustainable. • HGV use: with lorries carrying freight, this will cause congestion and therefore generate negative externalities – and a misallocation of resources/allocative inefficiency.			**Level 3: (5–10 marks)** For analysis of either why modes of transport are OR are not sustainable. 8–10 marks: *Good analysis*: one sided analysis which is explicitly linked to transport mode(s) 5–7 marks: *Basic analysis*: one sided analysis which is purely theoretical and not linked to different modes of transport **Level 2: (3–4 marks)** For an application of knowledge and understanding in terms of simple identification of which general modes of transport are more sustainable than others. An answer in this level may state that cars are less sustainable than buses but not explain/analyse why at all. **Level 1: (1–2 marks)** For knowledge and understanding of what sustainability is OR examples of different modes of transport.

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ADVANCED GCE

ECONOMICS

Transport Economics

F584

Candidates answer on the question paper.

OCR supplied materials:
None

Other materials required:
- Calculators may be used

Friday 17 June 2011
Afternoon

Duration: 2 hours

F5305506111

Candidate forename		Candidate surname	

Centre number						Candidate number				

INSTRUCTIONS TO CANDIDATES

- Write your name, centre number and candidate number in the boxes above. Please write clearly and in capital letters.
- Use black ink. Pencil may be used for graphs and diagrams only.
- Read each question carefully. Make sure you know what you have to do before starting your answer.
- Write your answer to each question in the space provided. If additional space is required, you should use the lined pages at the end of this booklet. The question number(s) must be clearly shown.
- Answer Section A and **one** question from Section B.
- Do **not** write in the bar codes.

INFORMATION FOR CANDIDATES

- The number of marks is given in brackets **[ ]** at the end of each question or part question.
- The total number of marks for this paper is **60**.
- The quality of your written communication will be taken into account in the marking of your answer to Section B.
- This document consists of **16** pages. Any blank pages are indicated.

A calculator may be used for this paper

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Turn over

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Section A

Answer **all** questions.

Best practice in the delivery of integrated transport

Faced with predictions of rising car ownership, the UK government has promoted integration as a way of delivering a more sustainable transport policy. Studies from elsewhere in Europe show that there are several key features involved in an integrated transport policy. These are:

- the creation of a single public transport authority responsible for the planning and co-ordination of public transport which is then able to oversee the introduction of 'through ticketing'
- drivers need to be offered the alternative of high quality public transport in order to encourage them to switch from their cars to buses or other forms of public transport
- significant investment in infrastructure and rolling stock with the need to support well maintained, modern vehicle fleets
- successful inter-modal integration with, for example, greater use of 'park and ride' facilities and the development of 'bike and ride' schemes at stations.

Overall, such policies involve significant investment from both the public and private sectors in the funding for infrastructure provision and rolling stock, as well as public sector revenue support schemes, such as fare subsidies.

One study of integrated transport policies compared Stuttgart (Germany) with Edinburgh and Bristol.

Fig. 1: A comparison of Stuttgart with two UK cities

	Stuttgart	Edinburgh	Bristol
Car ownership (cars per 1000 population)	502	373	375
Car modal share (as a % of all trips taken)	47	57	64
Sulphur dioxide emissions (tonnes per year)	1255	5352	3067
Nitrous oxides emissions (tonnes per year)	8027	10 849	8373

Key successes in Stuttgart include:

- growth in the use of public transport. This has been sustained due to the introduction of a common fare structure, the use of 'through ticketing' and the continual upgrading of the public transport fleet;

- promotion of public transport and support for other initiatives, such as car pooling have succeeded in reducing the modal share accounted for by car use;

- all new stations have been built on an 'open air' design with sheltered seating to create a brighter, more pleasant waiting environment for passengers.

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1 **(a)** Explain what is meant by the term 'sustainable transport policy'.

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(b) Using Fig. 1, what evidence is there to suggest that Stuttgart has been more successful than Edinburgh or Bristol in reducing reliance on the car?

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(c) **(i)** State **two** factors which the UK government might use in forecasting road transport demand. Explain how each of these factors affects the future demand for road transport.

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(ii) State and explain **two** problems which the UK government may have in making such forecasts.

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(d) The information in the case study refers to the need for greater public and private sector investment in infrastructure, rolling stock and also for public sector revenue support schemes.

(i) Using a diagram, comment on the impact of a subsidy to public transport operators.

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(ii) Discuss whether a greater role for the public sector in the provision of transport services will increase economic efficiency.

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Section A Total: [25 marks]

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Section B

Answer **one** question.

2 **(a)** Analyse how barriers to entry determine the degree of competition in transport markets. **[15]**

(b) Discuss the extent to which the UK bus market is contestable. **[20]**

3 **(a)** Analyse, using a diagram, the negative externalities arising from increased air transport use. **[15]**

(b) Discuss whether increased taxation or changes in regulation would be more successful in solving the market failures arising from negative externalities caused by increased air transport use. **[20]**

4 **(a)** Analyse the benefits arising from the construction of new trunk roads and motorways. **[15]**

(b) Discuss the effectiveness of the COBA method of appraisal in determining the allocation of resources to road building. **[20]**

Section B Total: [35 marks]

Paper Total: [60 marks]

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Section B

Question No. .....

Start your answer to part **(a)** here

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[15]

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Start your answer to part **(b)** here

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[20]

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Additional answer space. If you use this space, please make sure you number your answers carefully.

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GCE

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Advanced GCE

Unit **F584:** Transport Economics

Mark Scheme for June 2011

Oxford Cambridge and RSA Examinations

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Question			Expected Answer	Mark	Rationale/Additional Guidance
Section A					
1	(a)		**Explain what is meant by the term "sustainable transport policy" (line 2).** One mark for a clear definition such as that given by the Brundtland Report: policy *"that meets the needs of the present without compromising the ability of future generations to meet their own needs"* OR one mark for a definition that it involves policies which meet current demands without jeopardising the ability to meet the demand of future generations. One application mark for reference to sustainability <u>in transport</u>. Accept any relevant policy which achieves modal switch OR which attains more sustainable distribution. Accept EITHER specific examples of policies (e.g. road pricing or use of cleaner fuels) OR general objectives (e.g. to move people from car to public transport). DO NOT reward general policies lacking transport reference (e.g. "taxation")	**[2]**	One mark for knowledge of sustainability in general plus one mark for some application to transport <u>Knowledge mark</u>: accept a clear definition OR reference to a policy which <u>does not reduce</u> the number of scarce resources available. NOTE: vague reference to "scarce resources" alone is not enough. <u>Application mark</u>: any policy which aims at achieving modal switch. For example, policies which: • reduce car use • encourage greater use of public transport • moves freight from road to rail/sea • reduces the distance travelled by modes of transport (including greater co-operation in the use of HGV's) • make transport users pay the true price of their actions (Eddington Report)
	(b)		**Using Fig. 1, what evidence is there to suggest that Stuttgart had been more successful than Edinburgh or Bristol in reducing reliance on the car?** Award one mark for each of the following: • An explicit statement that Stuttgart has much lower modal use of cars than either Edinburgh or Bristol (simple quoting of stats not enough). Accept Bristol/Edinburgh higher modal share • An explicit statement that emissions levels of sulphur dioxide OR nitrous oxides <u>are lower</u> in Stuttgart than in both Edinburgh and Bristol (accept "lower pollution") • It HAS NOT been successful as Stuttgart has the greatest car ownership still.	**[2]**	DO NOT reward reference to general policies e.g. "reducing negative externalities" NOTE: DO award one mark where reference is made to the fact that it has **not** been successful ie Stuttgart still has the highest level of car ownership.

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Question			Expected Answer	Mark	Rationale/Additional Guidance
	(c)	(i)	**State two factors which the UK government might use in forecasting road transport demand. Explain how each of these factors affects the future demand for road transport.** One mark is available for identifying each factor, e.g.: • GDP (or economic growth) • Disposable incomes • Fuel prices / prices of complementary goods (DO NOT reward references to "running costs" or "car prices") • Population growth / demographic trends / the number of households. • Levels of car ownership / license holders • Industrial output • The price / availability / quality of public transport / substitute goods • the number of goods imported in to the country • previous data / historic data • PED or YED estimates • Changes in future tax rates OR government policy DO NOT reward simple references to price of road transport One further mark is available for relevant elaboration (see right hand column). Such explanation must explain how the factor results in a change in the future level of demand. Two marks maximum if only one factor is identified/explained. DO NOT award explanation marks for simple statements such as "increased fuel prices lower demand" until there is clear development of this. Likewise, do not give the explanation mark for "increased GDP will raise demand" until there is an explanation of WHY this is so.	[4]	Relevant elaboration may include: • The higher the GDP the higher the demand for goods & services, therefore the greater the demand for transportation / demand for cars. • Increased incomes increase the affordability with households benefiting from higher incomes Accept relevant development in terms of YED. • The higher price of fuel will result in cars being less affordable to run and, as such, there will be a reduction of demand. Also accept reference to a rise in price of complements. • The greater the population: (i) the greater the demand for goods & services – hence greater 'derived' demand for transport OR (ii) increased numbers of cars purchased BUT DO NOT award explanation mark for "higher population means more people on roads" as too vague • The greater the number of cars then the greater the level of accessibility which will result in increased numbers of journeys taken by car. • Increased output may require more deliveries of raw materials and/or finished goods & services - hence increased 'derived' demand for transport. • with public transport being a substitute to car use, if public transport falls in price then there should be a fall in demand for cars and vice versa **DO NOT REWARD THE SAME EXPLANATION TWICE (ie if both explanations relate to derived demand then award only one explanation mark)**

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Question			Expected Answer	Mark	Rationale/Additional Guidance
1	(c)	(ii)	**State and explain two problems which the UK government may have in making such forecasts.** One mark is available for identifying each factor. For example: • Estimates. Data is based upon estimated variables (such as forecasts of GDP statistics). These may be wrong – hence inaccurate forecasts. • Forecasts assume patterns of causality (e.g. higher fuel prices reduce car use) which may be wrong OR assumed relationships may be wrong (e.g. if YED differs then increased income has different effects) • It is difficult to decide exactly what factors to include in forecasts (e.g. what factors determine demand?) • There is uncertainty - the variables on which the data is based are unpredictable OR unforeseen events may occur such as natural disasters/economic shocks OR other factors need to be taken in to account which cannot easily be predicted. • Data can be time consuming / costly /difficult to collect • Forecasts will be based upon imperfect information / survey data may be unrepresentative or skewed – hence forecast data may be inaccurate • Data may be volatile/unstable which causes problems	[4]	One mark is available for development of each point. Development may take two forms: A. Clear development of the point itself which simply explains/develops the nature of the problem: For example, estimated data will be needed such as future fuel prices. Gaining accurate data is almost impossible – hence possible inaccuracy. B. Clear development of the consequences of the point: For example, if GDP is underestimated then there will be more cars on the road as people have higher disposable incomes (and therefore can afford to buy cars)–hence forecasts will underestimate road use DO NOT reward two points which simply develop the same issue ie uncertainty developed with two different examples
1	(d)	(i)	**Using a diagram, comment on the impact of a subsidy to public transport operators.** <u>Two marks for analysis</u>: Up to two marks are available for a correct diagram: • one mark for rightwards shift of supply curve • one mark for correct labelling of the diagram (price/quantity axes, curves and equilibrium points). ***DO NOT REWARD A SHIFT OF DEMAND or AD/AS*** Alternatively, if diagram does not show correct supply shift, award one analysis mark maximum for clear written reference to increased supply OR rightwards shift of supply OR lower costs of production ***<u>NOTE: WITHOUT ANALYSIS THE ANSWER SCORES 0</u>.***	[5]	<u>3 marks are available for relevant comment including:</u> • Depends upon type of subsidy (capital v fare) • With inelastic PED for public transport the impact of (fare) subsidies will be limited. • Size of subsidy - to have a noticeable impact, the subsidy will have to be very large • There will be a cost to govt (and opportunity cost) • Negative YED? Is it seen as an inferior good? If so then subsidies may be ineffective • What is it used for? Is it used to increase profits? • Is subsidy only short term or long term? • Fares subsidies won't work if prices are still higher than that of alternatives • Subsidies may lead to complacency/inefficiency One point well developed can gain all 3 eval. marks.

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Question			Expected Answer	Mark	Rationale/Additional Guidance
		(ii)	**Discuss whether a greater role for the public sector in the provision of transport services will increase economic efficiency.** *Three marks max for a one sided answer:* **Up to 3 marks for any relevant economic analysis. EITHER:** A. Analysing why growth of the public sector is good / private sector is bad: • Lower AC's: A larger public sector may enable firms to gain economies of scale (natural monopoly). Hence productive efficiency as firms produce at lowest AC. In contrast, smaller private firms may not benefit from economies of scale - higher AC's and prices. (This is very relevant in provision of infrastructure with very high FC's). • Public sector firms may be more concerned with service provision (allocative efficiency), aiming to satisfy consumer demands & not profit maximising. Accept "meets wants" • A greater role for the public sector will ensure that the market failure arising from negative and positive externalities is removed – hence allocative efficiency. • In public sector firms, workers may be more motivated – hence greater productive efficiency. • It will avoid the duplication of services which private sector competition may result in **OR:** B. Analysing why the private sector is good/public sector bad: • Lower AC's in the private sector due to the desire to maximise profits • The private sector may be more efficient as firms drive down costs in order to compete on prices • Hence lower prices may result in the private sector **Award three separate points OR one point well developed:** One mark for a basic point e.g. lower AC's OR lower prices OR better service OR fewer externalities OR higher motivation OR higher investment Two marks where there is clear development of the point e.g. why lower AC's may arise due to economies of scale. Three marks for clear reference to a type of economic efficiency.	[8]	*Award evaluation marks only for two sided response which involves explicit criticism of the public sector.* **Up to five marks for evaluation which includes clear reference as to why the public sector is less efficient:** • A greater role for the public sector may well result in complacency and productive inefficiency if firms rely upon government support/subsidies. X inefficiency. • Lack of competitive pressures result in inefficiency • Public sector firms may be inefficient as they lack the incentive of private firms to min. AC (to max profits). • Possible govt. failure-intervention causes inefficiency • Growth in the public sector may well result in firms being too large and diseconomies of scale occurring –higher AC's & productive inefficiency. • If firms lose touch with what consumers demand then they risk allocative inefficiency as they no longer produce goods & services which consumers demand • Cost to govt of expansion (opportunity cost?) • It depends how much the public sector grows by (and how big it was to begin with). ie what is the exact level of public sector involvement? • It depends what exact role the public sector undertakes ie service provision or regulation? • Possible government failure One point which is well made can gain up to three marks: Award one evaluation mark where a relevant factor is identified e.g. possible complacency. Award two evaluation marks where there is clear development of the point e.g. why this may be the case. Award three evaluation marks for clear development in terms of a specific type of economic efficiency. ***NOTE: WITHOUT ANALYSIS THIS SCORES ZERO.***
			Section A Total	**[25]**	

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Question			Expected Answer	Mark	Rationale/Additional Guidance
Section B					
2			**Analyse how barriers to entry determine the degree of competition in transport markets** Candidates should analyse HOW high barriers result in lower levels of competition (or vice-versa) Identification of examples of barriers = Level 1 Identification AND explanation of transport barriers = Level 2 Analysis of HOW barriers result in less competition = Level 3 **Level 3 [9-15]:** Analysis of HOW high barriers reduce competition (or vice versa). If there is no application to transport then mark at the lower end of each band within the level (eg 13/11/9 marks) 13-15 marks: *Very good analysis:* 2 or more barriers to entry must be analysed in terms of why these lower competition. 11-12 marks: *Good analysis*: One barrier clearly analysed. 9-10 marks: *Basic analysis:* simple analysis of one barrier OR clear analysis of one barrier not applied to transport OR basic analysis in general terms that lower barriers result in firms being able to enter markets freely and therefore compete – hence there will be a high degree of competition in markets. **Level 2 [5-8]:** For an application of knowledge and under-standing of different barriers to entry in transport: 7-8 marks: 2 or more transport barriers identified and explained 5-6 marks: 1 transport barrier identified and explained. Award 5 marks for recognising that higher barriers = less competition. **Level 1 [1-4]:** Knowledge & understanding of barriers: 3-4 marks: identification of two or more barriers not applied to transport markets 1-2 marks: identification of one barrier lacking clear transport application OR general definition of barriers	**[15]**	Relevant e.g.s of barriers to entry in transport include: • Economies of Scale (L1). Companies such as Stagecoach and Arriva will have huge EOS as they are national firms providing bus services (L2). Hence potential entrants find it difficult to compete on price against such huge firms & won't enter the market(L3) • High set up & sunk costs (L1), e.g. advertising or research before launch of a new train service (L2). High costs deter firms from entering the market as these will not be recouped on leaving the market and many will not be willing to take this risk. Hence fewer firms – and less competition – in the market (L3). • Existing firms may use predatory pricing (L1), for example lowering bus fares below costs of production (L2). New firms will not possibly be able to sell goods at such low prices and hence they will not enter markets–less competition (L3). • Inadequate information (L1) as to profitable routes & knowledge of where new services may be provided (L2). If potential entrants are unaware of the profits which could be made they won't enter markets (L3). • Legal barriers (L1). The need to meet safety criteria and prove that transport services will meet minimum standards can be significant (L2). Such costs will provide an obstacle to new potential entrants who may not be able to afford to meet the standards - hence resulting in less competition (L3). • Brand loyalty (L1). Customers may always use the same taxi firm or fly with the same company (L2). Knowing the difficulties of entering such markets may deter new firms from doing so (L3).

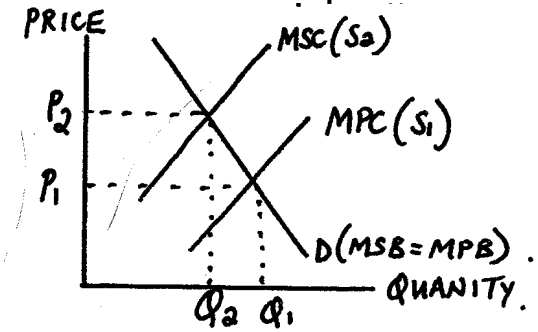
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Question	Expected Answer	Mark	Rationale/Additional Guidance
(b)	**Discuss the extent to which the UK bus market is contestable** Possible analysis as to why it is contestable includes: Deregulation in 1986 removed a significant legal barrier to entry (L1) – the requirement to prove a "need" existed for new services (L2). New companies are now only required to obtain an operator's license by registering their company and meeting basic safety standards (L2). In theory, by removing such legal barriers, this increased contestability as it enabled new firms to enter the market more easily (L3). New entrants are able to bid for subsidised routes (L1) through the tendering process (L2). THIS RESULTS IN NEW FIRMS BEING ABLE TO ENTER MARKETS (L3) ie contestable The bus market in some areas resembles monopolistic competition (L1). In such markets, there are a large number of firms and each is too small to engage in predatory pricing and take advantage of economies of scale (L2) ie in monopolistic competition, barriers are low (L2). HENCE OTHER FIRMS ARE ABLE TO ENTER THE MARKET (L3) ie it is contestable. Possible analysis of why it is not contestable includes: In practice, despite deregulation, the industry is not contest-able. Local oligopolies have emerged with dominant firms existing in different areas. This has resulted in barriers to entry existing which have reduced contestability. Possible barriers to entry include: • Dominant incumbent local bus firms (often with substantial economies of scale) can lower their prices to a much greater extent than new, smaller firms.	[20]	***SEE EARLIER QWC DESCRIPTORS ON PAGE 2*** For Level 4(a) answers, candidates will be expected to look at arguments on both sides of the debate and then come to a judgement as to whether or not it is contestable. Answers which are entirely one sided and look at why the bus market is OR is not contestable will receive a maximum of 10 marks. For Level 3, accept relevant monopolistic competition diagrams only when there is an explanation referring to low barriers and contestability.

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Question			Expected Answer	Mark	Rationale/Additional Guidance
			• Imperfect information exists with potential entrants often unsure of what profitable opportunities exist and which routes they should operate to maximise profits. To gain such knowledge, firms may be placed at a significant cost disadvantage. • Sunk costs do exist in the form of advertising of new routes and new company services, partly to overcome the brand loyalty which exists • Whilst legal barriers may be lower than they were 25 years ago, there are still safety standards for rolling stock which form a barrier to entry as new firms have to meet these safety standards as otherwise they will not be allowed to enter the industry • Accept relevant oligopoly theory AS LONG as this is in the context of contestability. In other words, analysis here takes the form of oligopoly reducing contestability due to high barriers to entry. Likewise accept analysis of barriers established by local monopolies. **Level 4 (a) [16-20]** For two sided analysis AND judgement as to how significant barriers to entry are in the bus industry. **Level 4 (b) [11-15]** For two sided discussion lacking judgement. **Level 3 [5-10]** One sided analysis ie analysis of why the bus market is OR is not contestable. (This may take the form of analysing existing high barriers to entry). **Level 2 [3-4]** For an application of knowledge and understanding of deregulation in the bus industry. **Level 1 [1-2]** For knowledge and understanding of what contestability is.		Possible judgement includes: • The degree of contestability varies from region to region. In other words, the answer to the question depends upon which area of the country you are talking about • Whilst deregulation has reduced some barriers to entry a number remain e.g. high fixed costs/start-up costs of bus depots. Hence not contestable. • The level of contestability depends upon how active regional Traffic Commissioners are • It depends which market is being considered-the deregulation of long distance coaches has been more successful than local bus services. **Level 4(b):** 13-15 marks: balanced discussion 11-12 marks: basic discussion where there is only basic analysis of one side of the argument. **Level 3:** 8-10 marks: relevant analysis applied explicitly to the bus industry 5-7 marks: relevant analysis of deregulation which is not specifically applied to the bus market **Level 2:** Answers in this level will simply describe changes in the bus industry. In other words, applying knowledge of changes in the bus industry. **Level 1:** answers in this level will simply state what deregulation or contestability are.

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Question			Expected Answer	Mark	Rationale/Additional Guidance
3	(a)		**Analyse, using a diagram, the negative externalities arising from increased air transport use.**  **Level 3 [9-15]** For analysis including a diagram: 13-15 marks: *Very good analysis*: A perfect diagram plus clear analysis of two points. (If no application to air transport then award only 13 marks). 11-12 marks: *Good analysis:* A perfect diagram plus EITHER clear analysis of one point OR basic analysis of two points. In addition, award 11-12 marks for a partially correct diagram plus analysis of two points. (If not applied to air transport then only 11 marks). 9-10 marks: *Basic analysis*: A partially accurate diagram plus EITHER good analysis of one point OR basic analysis of two or more points (9-10). If not applied to air transport then 9 marks. (A perfect diagram alone = 9 marks; a perfect diagram plus basic analysis of one point = 10). An inaccurate diagram with written analysis gains 9 marks max. **Level 2 [5-8]** Application of knowledge and understanding. 7-8 marks: A partially accurate diagram plus identification of two points = 8 marks, one point = 7 marks. 5-6 marks: Partially accurate diagram alone OR no diagram/ inaccurate diagram with identification of relevant points (6 max) **Level 1 [1-4]** Knowledge and understanding: 3-4 marks: a clear definition of externalities (SC>PC) 1-2 marks: a basic definition (ie a cost to third parties) OR an inaccurate diagram alone = 4 max.	[15]	**Diagrams:** An 'accurate' diagram gains nine marks (bottom L3) but only if perfectly correct including MSC/MPC labelling. A 'partially accurate' diagram may have an error in labelling (e.g. axes missing / equilibrium points the wrong way round / incomplete labelling / supply rather than MSC/MPC approach taken). A 'partially correct' diagram will have correct MSC/MPC as a minimum. An 'inaccurate' diagram will shift demand OR invert MPC and MSC. If there is no written analysis six max. If NO diagram is used OR an inaccurate diagram is produced then a MAXIMUM of nine marks is available. **Relevant analysis includes the following points:** • Over-consumption occurs (L2) as consumers fail to see the true social costs of their actions / don't pay the true price – hence air travel is cheaper than it should be / underpriced (L3) • Allocative inefficiency/a misallocation of scarce resources occurs (L2) as too many resources will be used producing goods & services which society does not want (L3) • Increased pollution from plane emissions (L2) worsens asthma and incurs cost to the NHS (L3) OR to innocent local residents (L3). • Noise pollution, visual intrusion and blight arise from planes and airports (L2). These factors will have negative impacts upon local house prices and quality of life for people living nearby (L3) • Accept increased risk of plane accidents (L2) – third party costs in terms of cost to NHS of treating injured, cost of response by emergency services and injury to innocent 3rd parties (L3).

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Question			Expected Answer	Mark	Rationale/Additional Guidance
3	(b)		**Discuss whether increased taxation or changes to regulation would be more successful in solving the market failures arising from negative externalities caused by increased air transport use** Answers are expected to analyse the arguments for and against both methods of government intervention. Taxation: analysis: A diagram showing the supply curve shifting to the left with some basic explanation. Alternatively, clear written analysis that taxation provides a deterrent as higher prices will deter consumers from purchasing a good (e.g. Air Passenger Duty). Simple reference to increased price IS NOT enough until developed in terms of taxes discouraging certain behaviour. Regulation: analysis: Accept a diagram showing leftwards shift of supply with some basic explanation in terms of either: regulations increasing airlines' costs of production (e.g. increased compliance costs such as health and safety) OR regulation setting limit on production/supply enforced by law Written analysis must take the form of explaining how an individual's behaviour is altered. For example, the threat of a fine or other legal action results in a firm altering their behaviour and correcting market failure. Accept analysis of regulation in terms of barriers to entry reducing supply OR output in the industry OR forcing firms to leave the industry. Alternatively, accept clear written analysis that regulation reduces supply and hence raises price and reduces demand. Drawbacks to taxation include: • There is a problem deciding what level of tax to introduce – ideally equal to external costs but these are difficult to measure • Taxation needs to be introduced internationally to avoid companies simply relocating • With inelastic PED high taxes on passengers will be much less effective at internalising externalities • It depends upon how large the rise in tax is.	[20]	***SEE EARLIER QWC DESCRIPTORS ON PAGE 2*** NOTE: for analysis of policies, accept relevant diagrams BUT there must be some basic explanation / reference to these. Otherwise, Level 2 will be awarded. Valid application of regulation to air transport includes possible emissions and noise regulations, government restrictions over the size and design of planes, government control over the possible number of landing slots and possible restrictions over the number of flights allowed. Given the context of air travel, accept reference to pollution / tradeable permits ALSO accept price controls as a form of regulation

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Question	Expected Answer	Mark	Rationale/Additional Guidance
	Drawbacks to regulation include: • Regulation costs the government money to enforce and therefore incurs an opportunity cost. • The effectiveness of regulation totally depends upon the willingness of the govt to enforce and police it. • Effectiveness depends upon the level of fines incurred – if too low then regulations may be ignored • There is no on going incentive to improve once standard set • There is a need for international agreement here • Regulation may create black market conditions • Possible government failure if regulation set at wrong level • Regulation sets barriers which reduce competition in mkts. **Level 4 (a) [16-20]** Discussion of BOTH policies which includes a judgement as to which policy would be best – taxation or regulation. Two sided analysis of BOTH needed. Answers with no application to air transport =17 marks max. **Level 4 (b) [11-15]** For discussion of the effectiveness of taxation and / or regulation in air transport: 13-15 marks: *balanced discussion*: Analysis of advantages & disadvantages of both policies applied to air = 14-15 marks Analysis of advantages & disadvantages of one policy (ie two sided answer) plus one sided analysis of second policy with both applied to air transport = 13 marks ** 11-12 marks: *basic discussion*: analyses the advantages and disadvantages of EITHER taxation OR regulation. If no application to air travel then award 11 marks. **Level 3 [5-10]** Analysis of how taxation and/or regulation can correct market failure OR analysis of advantages of one policy along with analysis of drawbacks of another. 8-10 marks: analysis of two policies. 5-7 marks: analysis of one. **Level 2 [3-4]** For application of knowledge & understanding of how taxation and regulation can correct market failure. 4 marks: explains relevant eg's of BOTH tax and regulation 3 marks: explains one example of either tax OR regulation **Level 1 [1-2]** For knowledge and understanding of tax/regulation		**Level 4(a):** the advantages and disadvantages of BOTH policies must have been discussed. Possible judgement includes: • Taxation is better than regulation as taxes raise the government revenue whilst regulation actually incurs a net cost to the government. • Neither policy will be effective if not introduced on an international basis. To be effective international agreement is needed. • Given the limitations of both policies, other approaches, such as tradeable permits, may be more effective. • On their own, each policy may be less effective than if combined as part of a wider, more integrated policy. • Simple judgement may take the form of stating that both policies need to be used together. ** Note: If balanced discussion occurs which is not at all linked to air travel then 13 marks will be awarded **Level 1:** One mark for simple definition of each of regulation and taxation.

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Question			Expected Answer	Mark	Rationale/Additional Guidance
4	(a)		**Analyse the benefits arising from the construction of new trunk roads and motorways** Possible benefits include: • Lower fuel consumption (L1) • Less wear and tear on vehicles (L1) • Reduced journey times (L1) • Profits gained by construction firms (L1) • Increased supply of road space reduces user costs • Reduced congestion, certainly in the short term, if new roads are built at congestion 'bottlenecks' (L1) • Better infrastructure enables firms to deliver goods and services faster (L1) • Firms may locate business closer to new roads (L1) • Possible regional multiplier effects (L1) • Less congestion (L1) • Fewer accidents (L1) and hence reduced cost burden to the NHS • Lower emissions (L1) (as vehicles will travel at a more optimum speed for fuel consumption) **Level 3 [9-15]** For analysis of the different benefits. 13-15 marks: *Very good analysis*: two or more benefits are analysed clearly 11-12 marks: *Good analysis*: basic analysis of two or more benefits OR good analysis of one benefit. 9-10 marks: *Basic analysis*: basic analysis of one benefit. **Level 2 [5-8]** Application of knowledge and understanding of the benefits of road construction. 7-8 marks: two or more benefits are identified & explained 5-6 marks: one benefit identified and explained **Level 1 [1-4]** Knowledge and understanding of the benefits of road construction lacking any explanation / development 3-4 marks: Two or more benefits identified 1-2 marks: One benefit identified only.	**[15]**	Candidates will be expected to explain what the main benefits of road construction are using economic terminology: • Reduced fuel costs (L1) due to lower fuel consumption and less wear and tear on vehicles if they are no longer stopping and starting (L2). Hence reducing costs to the decision maker (L3) • Arguably there will be less congestion, certainly in the short term, if new roads are built at congestion 'bottlenecks' (L1). This will reduce time that workers spend in traffic / reduce wasted time (L2) and hence raise output and productivity (L3). • Better infrastructure enables firms to deliver goods and services faster (L1) hence reducing the fleet sizes required by businesses (L2) and lowering costs of production (L3) • New roads may also result in firms relocating / locating businesses to the area (L1) • Increased government spending on roads and infrastructure within one area may well result in benefits to the local economy via regional multiplier effects • Less congestion may lead to fewer accidents as cars are more spread out on roads (L2) and hence reduced cost burden to the NHS (L3) **Accept correct diagrams** for L3 as long as they are accompanied by an explanation. For example, if using S&D it shows supply shifting to the right it must refer to lower prices/user costs (as the benefit). If using AS&AD and rightwards shift of AS is shown then it must refer to increased output (as the benefit). Also accept rightwards shift of AD as long as macro-economic benefits are recognised.

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Question			Expected Answer	Mark	Rationale/Additional Guidance
4	(b)		**Discuss the effectiveness of the COBA method of appraisal in determining the allocation of resources to road building** COBA is a decision making technique used by central government as part of the decision making process when deciding upon whether - and also where – to build new roads. It has developed, so whilst early models of COBA were flawed, over time it has become a more sophisticated appraisal technique. Good analysis: COBA compares the costs & benefits of road construction. In more detail: Costs include the actual costs of construction plus the maintenance costs of the road. Benefits are measured in terms of the reduction in road user costs and includes 3 factors: lower accident costs, time saved by motorists on the improved road network and the reduction in vehicle operating costs. Basic analysis: The basis of COBA, as with any CBA, is to gain a single monetary value for the net social benefit (NSB) of a project. The project with highest NSB is undertaken. Scarce resources will be allocated to the project with the highest NSB. In this way, social welfare will be maximised and the govt achieves an optimum allocation of resources. Relevant discussion of the effectiveness of COBA includes: • COBA is too 'user based'. The 'benefits' used are measured by the reduction in user costs resulting from new roads. Some argue that COBA attaches too high a cash value to the benefits which motorists derive from new schemes in comparison to other factors.	[20]	***SEE EARLIER QWC DESCRIPTORS ON PAGE 2*** **NOTE: Answers which discuss general CBA and not COBA can receive a maximum of 12 marks.**

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Question			Expected Answer	Mark	Rationale/Additional Guidance
			• COBA does not include an estimate for external costs and benefits arising from road construction. It is therefore not fully comprehensive as it ignores indirect costs and benefits. Clearly these are going to be a significant part of any decision making process. • COBA can be a very long and expensive process (eg Newbury bypass COBA took 20 years). • COBA also requires a significant number of value judgements to be made. Eg which factors should be included and how do we value time and life when looking at the benefits of new road construction? • COBA only applies to roads and does not determine the allocation of resources in major areas of transport expenditure such as rail and infrastructure projects (eg airports and docks). As such, COBA doesn't guarantee an optimum allocation of resources across the transport sector as a whole. **Level 4 (a) [16-20]** Discussion which includes a judgement as to how effective COBA is as decision making technique. **Level 4 (b) [11-15]** For discussion of some of the difficulties in using COBA. See right hand side for detail. **Level 3 [5-10]** Analysis of how COBA determines the allocation of resources in transport OR analysis of problems **Level 2 [3-4]** Application of knowledge and understanding of COBA. Will include egs of costs & benefits but no reference to decision making criteria. **Level 1 [1-2]** For knowledge and understanding of COBA		**Level 4(a):** Relevant judgement may include: • Whilst flawed, COBA arguably attempts to perform an impossible task – namely correctly measuring external costs and benefits. As such it does contribute to te decision making process. • When used in conjunction with other policies it will be effective in determining an efficient allocation of resources **Level 4(b):** 13-15 marks: Good discussion with analysis of how COBA works and then at least two criticisms analysed 11-12 marks: Basic/unbalanced discussion. EITHER good analysis of COBA with basic analysis of one limitation OR analysis of general CBA along with analysis of limitations. **12 marks max if CBA rather than COBA discussed** **Level 3:** 8-10 marks: *Good analysis*: analysis of how costs & benefits within COBA are derived (see earlier explanation) 5-7 marks: *Basic analysis*: analysis of the decision making criteria used for any CBA (ie selecting the project which has the highest NSB where NSB = SB – SC) OR analysis of criticisms of CBA generally (rather than COBA).
			Section B Total	**[35]**	
			Paper Total	**[60]**	

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F584

Candidates answer on the Question Paper

OCR Supplied Materials:
None

Other Materials Required:
- Calculators may be used

Friday 28 January 2011
Afternoon

Duration: 2 hours

* F 5 8 4 *

* OCE/23770 *

Candidate Forename		Candidate Surname	

Centre Number						Candidate Number				

INSTRUCTIONS TO CANDIDATES

- Write your name clearly in capital letters, your Centre Number and Candidate Number in the boxes above.
- Use black ink. Pencil may be used for graphs and diagrams only.
- Read each question carefully and make sure that you know what you have to do before starting your answer.
- Answer Section A and **one** question from Section B.
- Do **not** write in the bar codes.
- The spaces should be sufficient for your answers but if you require more space use the lined pages at the end of this booklet and number your answers carefully.

INFORMATION FOR CANDIDATES

- The number of marks is given in brackets **[ ]** at the end of each question or part question.
- The total number of marks for this paper is **60**.
- The quality of your written communication will be taken into account in the marking of your answer to Section B.
- This document consists of **16** pages. Any blank pages are indicated.

A calculator may be used for this paper

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Section A

Answer **all** questions.

Congestion may be down but...

It sounds like good news. In 2007, for the first time in 16 years, congestion in America's urban areas actually declined. This finding came in a report published by the Texas Transportation Institution which for years has rung alarm bells about congestion in the hope that politicians in Washington will hear. With the publication of this report, it may seem to many, that high fuel prices have solved the problem of congestion but unfortunately this is not the case.

Even though the report shows that congestion has dropped, congestion still forced Americans to travel for 4.2 billion extra hours and buy an extra 2.8 billion gallons of petrol. The cost of all these delays was $87.2 billion, an increase of over 50% since 1997.

The recent decline in congestion may be attributed to rising fuel prices and a slumping economy but neither development is welcome or permanent. History suggests that when the economy rebounds, congestion will too.

The Texas Transportation Institution points to some simple steps which could help reduce congestion such as shortening the response time of the emergency services to accidents; which would result in traffic moving again more quickly. In the long term, however, road pricing is surely the answer. All drivers pay the same tax rate on petrol whether they are driving on a congested or uncongested road. It is society which bears the costs of pollution and wasted time. Road pricing is certainly controversial – a plan to introduce it in Manhattan was dropped last year. But if Americans do not want to be stuck in their cars, they had better get a move on.

It is not only Manhattan which has rejected road pricing, the same has happened in the UK in Manchester and Edinburgh. Equally, the UK has also experienced a fall in traffic volumes of late; as shown in Fig. 1.

Fig. 1: Car and heavy goods vehicle traffic by road in the UK

Type of vehicle and road class	Change in traffic (vehicle miles) 2008–2009
Car traffic on motorways	–4%
Car traffic on urban 'A' roads	–1%
Car traffic on rural 'A' roads	–3%
Heavy goods vehicle traffic on motorways	–11%
Heavy goods vehicle traffic on urban 'A' roads	–14%
Heavy goods vehicle traffic on rural 'A' roads	–10%

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1 **(a)** **(i)** Using Fig. 1, compare the changes in car traffic and heavy goods vehicle traffic.

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..... **[2]**

(ii) State and explain **two** possible factors which may account for the change in road traffic.

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(b) Explain why road space in the UK is termed a quasi-public good.

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(c) (i) Why is road congestion seen as a negative externality?

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(ii) Comment on the effectiveness of higher fuel prices as a means of reducing car use.

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(iii) Discuss whether a national road pricing system will be effective in solving the market failure arising from road traffic congestion.

.... **[8]**

Section A Total: [25 marks]

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Section B

Answer **one** question.

2 **(a)** Analyse the difference between the short run and long run equilibrium of a firm in monopolistic competition. **[15]**

(b) Discuss whether the objective of firms in the transport sector should always be that of profit maximisation. **[20]**

3 **(a)** Analyse the main reasons why there has been increased growth in air travel in the last ten years. **[15]**

(b) Discuss the impact of increased competition on firms in the airline market. **[20]**

4 **(a)** Analyse what is meant by an integrated transport policy. **[15]**

(b) Discuss whether recent government policy has been successful in achieving an integrated transport policy. **[20]**

Section B Total: [35 marks]

Paper Total: [60 marks]

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Section B

Question No. .....

Start your answer to part **(a)** here

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Start your answer to part **(b)** here

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Additional answer space. If you use this space, please number your answers carefully.

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RECOGNISING ACHIEVEMENT

GCE

Economics

Advanced GCE

Unit **F584:** Transport Economics

Mark Scheme for January 2011

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All Examiners are instructed that alternative correct answers and unexpected approaches in candidates' scripts must be given marks that fairly reflect the relevant knowledge and skills demonstrated.

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Question			Expected Answer	Mark	Rationale/Additional Guidance
Section A					
1	**(a)**	**(i)**	**Using Fig. 1 compare the changes in car traffic and heavy goods vehicle traffic** Both forms of transport saw a fall in traffic levels (1 mark) HGV's saw a much more notable decline than cars (1 mark) Car traffic saw the biggest decline on motorways whilst for HGV's it was on urban 'A' roads (1 mark). Accept data. OR 2 marks for a statement which is clearly developed, for example that both types of traffic usage has fallen and then some statement as to the proportion/scale of change	**[2]**	**Candidates must make explicit, comparative statements. Do not accept implied statements.** Candidates get 1 mark for magnitude and 1 mark for direction. Award 1+1 for two simple statements or 2 marks for a clearly developed statement which contains some reference to scale/proportion.
		(ii)	**State and explain two possible factors which may account for the change in road traffic** Award 1 mark for the correct identification of each possible factor, for example: • Increased fuel prices / price of complements • It is more expensive to run cars • The economic slowdown • Falling prices of substitute goods (i.e. cheaper public transport) • better quality/more reliable public transport/greater investment in other modes • greater congestion which has increased the costs of motoring for the individual • increased cost of buying cars • increased taxes on cars themselves • change in tastes and fashions away from car driving • shift of freight away from roads Award 1 further mark for relevant development/elaboration of the point	**[4]**	A maximum of 2 marks for each point are available, therefore no matter how good the development of the first point is, if only one factor is considered then only 2 marks can be rewarded. Credit answers which refer to two valid points in the first section of answer space. Accept answers which use valid theory to explain a growth in road traffic. 4 marks maximum available.

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Question			Expected Answer	Mark	Rationale/Additional Guidance
	(b)		**Explain why road space in the UK is termed a quasi-public good** 2 marks for knowledge. For 2 marks need clear definition: • a good which appears to meet the characteristics of non-rivalry and non-excludability but which fails to meet both of these in reality • a good which does not always meet / partially meets the characteristics of non rivalry/non excludability • a good which is rival AND non excludable or vice versa Award 1 mark for a more general statement e.g.: • adopts characteristics of both public & private goods • which has some of the characteristics of a public good • it meets one of the characteristics of a public good A further 2 marks for correct application of characteristics.	[4]	DEFINITION: 2 marks for definition APPLICATION: 2 marks for correct application of characteristics i.e. why these characteristics apply to road space. Rivalry: Roads may be seen as rival as at peak times during congestion, there is limited road space (and hence one users consumption reduces another's) (1 mark). Excludable: If drivers do not have licenses or are under 17 (1) or in the case of private roads / toll roads e.g. M6 Toll (1) roads are excludable In addition, award 1 mark for correct application of non-rivalry OR non-excludability
	(c)	(i)	**Why is road congestion seen as a negative externality?** Two marks for a clear knowledge: For example, road congestion results in social costs exceeding private costs (2) OR a cost/negative effect imposed on a third party (2) One mark for basic knowledge, for example: a cost imposed on others OR a cost to society OR a cost to members of the public OR a cost not borne by the decision maker OR a divergence between PC & SC (lacking directionality).	[2]	2 marks for clear knowledge 1 mark for basic knowledge DO NOT reward the simple statement that road congestion is an external cost. DO NOT reward reference to misallocation of resources. DO NOT reward examples.

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Question			Expected Answer	Mark	Rationale/Additional Guidance
		(ii)	**Comment on the effectiveness of higher fuel prices as a means of reducing car use** Up to 2 marks for analysis: • higher fuel prices raise MPC / PC / costs of prod. (1) • a contraction / fall in demand / lower consumption(1) • car use now less affordable OR fuel now takes up a higher % of income (1) • alternative modes now relatively cheaper (1) • greater demand for substitute / alternative modes (1) A further 3 marks are available for discussion including: • Inelastic demand for car use / cars are necessities • How big the rise in duty is • Business driving may well see little change whilst leisure driving may see a big fall • It is a blunt policy and takes no account of changes in external costs at different times of the day • Cost-push inflation / loss of competitiveness overseas • Need to be applied internationally and across EU to avoid companies relocating across the Channel • High income groups much less affected by this than low income groups – regressive? • An alternative to car use is needed if this is to succeed • People still drive but buy more fuel efficient cars	**[5]**	Diagram analysis marks: 1 mark for leftwards shift of supply / MPC 1 mark for fall in demand / quantity *NOTE: no analysis mark for stating increased price.* Award all 3 marks where one evaluative point is very clearly / well developed. Alternatively, where 3 evaluative factors are identified then award 3 marks. Accept accurate diagrams for development of PED **PLEASE ANNOTATE ANSWERS TO c(ii) and c(iii) WITH BREAKDOWN OF MARK AND ALSO BRIEF COMMENT AS TO HOW EVALUATION MARKS AWARDED.**
		(iii)	**Discuss whether a national road pricing system will be effective in solving the market failure arising from road traffic congestion** Up to 3 marks for analysis (see right hand column) Up to 5 marks for relevant evaluation, including: • What level should the charge be set at? • PED issues – inelastic PED means ERP less effective	**[8]**	Analysis marks: 3 max. Award 1 mark for each of: • charges raise Private Costs to equal Social Costs OR users now pay full SC • charge should be set equal to external costs • road pricing will raise costs of production / PC • the supply curve / MPC shifts left • this will internalise the neg. externality / ext. cost • polluter pays

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Question			Expected Answer	Mark	Rationale/Additional Guidance
			• Flat rate charges are regressive • An alternative to the car needs to be in place at the start of the charging scheme ie a substitute is needed • Some minor roads may not be included – hence traffic may be displaced rather than reduced • UK haulage firms will face higher costs which will reduce their competitiveness / is inflationary. • The set up costs of such a scheme could be immense • To be effective, the revenues would have to be hypothecated back in to public transport • Charges need to vary throughout day /from car to car • needs to be used in conjunction with other solutions		• price rises • demand OR quantity falls / discourages car use • overconsumption is removed • misallocation of resources is corrected Accept a relevant diagram showing a leftwards shift of supply for all 3 analysis marks. (2 max. for a negative externality diagram for lower Q and higher P but which lacks clear shift of supply curve / MPC). One good point of evaluation can gain up to 3 marks
			Section A total	**[25]**	

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Question			Expected Answer	Mark	Rationale/Additional Guidance
Section B					
2	**(a)**		**Analyse the difference between the short run and long run equilibrium of the firm in monopolistic competition.** Monopolistic competition is a market structure with: • a large number of firms in the industry • firms provide similar but slightly differentiated products • in SR firms make supernormal profits (and these profits provide an incentive / attraction for new firms to enter the industry). • with low/few barriers to entry, new firms will enter the market and compete these profits away in the long run. For the individual firm, this is shown by a leftwards shift in their demand curve as they lose sales to the new entrants. Thus in the long run, only normal profit will be made. **Level 3 [9-15 marks]** For clear analysis of both short and long run equilibrium. Possible analysis includes two points: 1. The absence of barriers to entry (L1) enables new firms (attracted by high profits) to enter the market (L2) and compete away SR supernormal profits (L3). 2. Only normal profit earned in the LR (L1) as AC=AR (L2) This is because the new entrants take sales away from existing firms as shown by a leftwards shift in the demand curve for existing firms (L3) OR analysis of the industry supply curve shifting right & price falling (L3) **Level 2 [5-8 marks]** For application of knowledge and understanding of the characteristics of SR and LR monopolistic competition.	**[15]**	**Level 3:** Here, answers need to clearly analyse the difference between SR and LR. This may be achieved using diagrams: two perfectly correct diagrams will gain 9 marks maximum although full marks can be gained for a written answer. 14-15 marks: Excellent analysis. There is good analysis of both points 13 marks: Very good analysis. One point is clearly analysed WITH correct SR/LR diagrams OR good analysis of one point plus basic analysis of a second 11-12 marks: good analysis. There is good analysis of one point. (ALSO award 11 marks where there is basic analysis of one point plus two correct diagrams) 9-10 marks: basic analysis of 1 point OR 2 diagrams **Level 2:** Answers in this level will identify AND describe / explain some of the characteristics of the market OR contain one accurate diagram. 7-8 marks: two characteristics identified and described 5-6 marks: one characteristic identified and described One accurate diagram explicitly identified as showing SR OR LR equilibrium will be worth 5 marks. **Level 1:** answers in this level identify some of the characteristics of monopolistic competition: Clear knowledge (2 or more characteristics) = 3-4 Basic knowledge (1 characteristic) = 1-2 marks

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Question			Expected Answer	Mark	Rationale/Additional Guidance
			Level 1 [1-4 marks] For basic knowledge and understanding of what monopolistic competition is.		
	(b)		**Discuss whether the objective of firms in the transport sector should always be that of profit maximisation.** Relevant analysis includes: • Firms will be keen to maximise profits to keep shareholders happy/maximise their return • Firms may be keen to profit maximise to ensure the most amount of money possible to reinvest • benefits of firms pursuing profit maximisation in terms of greater efficiency / lower prices / greater quality • *an accurate diagram showing correct profit max. position (no need to shade area of profit). A diagram with clear indication of where the firm operates is acceptable.* Possible evaluation includes: • Firms may not be run by shareholders so managers may be free to pursue other objectives (the 'principal - agent problem'). Other objectives include maximising market share, maximising sales revenue, 'satisficing', sacrificing SR profits for larger LR profit and also other managerial objectives. • Profit satisficing may be a more realistic goal where managers are trying to satisfy diverse range of stakeholders – consumers, workers and shareholders etc. This may be seen in the cases of small haulage & coach operators who aim to survive. • Profit satisficing rather than max may be used where firms wish to cross subsidise services • Firms may pursue a policy of predatory pricing and sacrifice SR profits in order to boost LR profit	**[20]**	***SEE EARLIER QWC DESCRIPTORS ON PAGE 2*** Several different approaches are acceptable to this question: **Approach A:** candidate who answers the question directly and looks at **WHETHER** profit maximisation should be followed (i.e. the benefits of such an approach verses possible costs). For example, increased efficiency and quality of service verses possible costs in terms of lower wages / loss of natural monopoly economies of scale. **Approach B:** candidate analyses **WHY** profit maximisation is followed and then analyses alternatives to this (see possible evaluative comments in Level 4 descriptor) **Level 4(a):** Relevant judgement may include: • firms' objectives will vary depending upon who the most influential stakeholders are • objectives may well vary depending upon the level of regulation/application of competition policy by the government. To gain 19-20 marks, clear application to transport markets must be used.

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Question			Expected Answer	Mark	Rationale/Additional Guidance
			• Managers may be unwilling to take risks to profit max. • May not profit max to avoid new firms entering market • Firms may not know where MC=MR is • Profit max may result in cost cutting measures which may result in shortcuts/safety issues? • In a Transport context, service provision may come first e.g. Network Rail is expected to plough any profits it makes back in to infrastructure provision. Hence profit max. may not be a key objective here. • Some firms may be run on a 'not for profit' basis and aim to provide the best possible service to taxpayers at the lowest cost (e.g. merit good provision) • Likewise, in some local bus markets, sales revenue maximisation (and predatory pricing) has arguably been an objective pursued by some firms in the short run (e.g. Darlington and Chesterfield). • In many transport markets, it is more realistic to see non-profit max. objectives - firms often require subsidies to maintain services which profit max. firms would not provide. • Public owned industries aim for service provision • Profit max. may lead to inequity or reduced consumer surplus if achieved by higher prices. **Level 4 (a) [16-20]** For a discussion which includes a judgement as to why firms will profit maximise or not. Answers in this level must analyse why profit maximisation will AND will not be the aim **Level 4 (b) [11-15]** Discussion of why firms may not always profit maximise. **Level 3 [5-10]** Analysis of why profit maximisation is/is not a relevant strategy for firms to pursue - a one sided answer only.		**Level 4 (b):** 14-15 marks: clear two sided analysis, as below, with clear application to the transport sector. 13 marks: clear, balanced, two sided analysis but lacking transport application. Answer analyses why profit maximisation will be main objective and then analyses why firms may not profit maximise. 11-12 marks: basic, unbalanced, two sided analysis with or without transport application. For example, basic analysis of why profit maximisation is the main objective before analysing why other objectives may be pursued. AWARD 12 MARKS MAX. WHERE THERE IS ANALYSIS OF PROFIT MAX. AND ANALYSIS OF WHY OTHER OBJECTIVES MAY BE PURSUED BUT NO EXPLICIT CRITICISM OF PROFIT MAX. **Level 3:** Answers which analyse why profit max. is OR is not pursued. 8-10 marks: one sided analysis (eg firms aim to profit maximise in order to keep shareholders / owners happy) WITH relevant application to transport markets 5-7 marks: purely theoretical analysis lacking any transport application. (Theory of firm diagram showing profit maximisation with nothing else = 5 marks). **Level 2:** basic application of alternative objectives eg answer lists what the possible alternative objectives are OR states why firm profit max with no analysis.

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Question			Expected Answer	Mark	Rationale/Additional Guidance
			Level 2 [3-4] For an application of knowledge and understanding of what alternatives to profit maximisation exist. Answers list alternatives objectives which the firm may pursue without actually analysing why these may be realistic. **Level 1 [1-2]** For knowledge and understanding of what profit maximisation is OR what is meant by firms' objectives.		

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Question			Expected Answer	Mark	Rationale/Additional Guidance
3	(a)		**Analyse the main reasons why there has been increased growth in air travel in the last ten years.** Candidates will be expected to analyse factors which may account for the rise in air travel. These may include: • The fall in relative prices of air fares (particularly for short haul flights) • Lower barriers to entry in the short haul market (deregulation with the 'open skies' policy in the EU) • The rise in price of alternative modes (eg rail) • Increased disposable incomes • Changes in tastes & fashions (eg holidays abroad) • Technology – many more consumers now shop on line for plane tickets • Lower cost airlines have emerged, increasing the availability/supply of flights • Increased number of airports increasing the capacity for flights in / out of many UK cities and also increase choice of destinations to fly to. • Globalisation resulting in more business trips and more global trade (requiring transport) • Increased competition (price and non price) **Level 3 [9-15 marks]** Analysis of why air travel has grown. **Level 2 [5-8 marks]** Application of knowledge and understanding of why there has been increased demand for air travel. Relevant factors explaining increased air travel are listed but not analysed.	**[15]**	**Level 3** answers analyse different factors. Accept any relevant points which analyse why growth may have occurred. These may be supply or demand factors 14-15 marks: Excellent analysis - three factors all analysed clearly. Five factors analysed in a basic way 13 marks: Very good analysis – three or four factors analysed in a basic manner OR two analysed well. 11-12 marks: Good analysis of one factor OR basic analysis of two factors. 9-10 marks: basic analysis of one factor only. (Note: the list of factors on the left is simply indicative of acceptable points and in no way exhaustive). **Level 2** answers identify and explain what the factor is without analysing why this leads to greater air travel. 7-8 marks: where 2 factors are explained 5-6 marks: where 1 factor only is explained The distinction between Level 2 and Level 3 is vital here. For example, "Increased disposable incomes have resulted in rising demand for air travel" is level 2 until some economic analysis is applied here, for example: "increased disposable incomes mean that consumers will now be able to afford to buy more goods and services and hence the demand curve for products will shift to the right" is Level 3 **Level 1** answers include basic references to why demand curves shift to the right but lack transport application.

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Question			Expected Answer	Mark	Rationale/Additional Guidance
			Level 1 [1-4 marks] For a basic knowledge and understanding of why any demand curve shifts. (No application to air travel).		
	(b)		**Discuss the impact of increased competition on firms in the airline market.** Relevant analysis includes: • Increased competition raises supply / lowers price • Increased productive efficiency. Firms need to lower average costs to reduce prices (to compete with budget airlines). Reduced 'X' inefficiency. • Increased allocative efficiency with firms producing exactly the good which consumers demand • Dynamic efficiency gains (over the long term) with firms investing in more research and development and therefore creating new, innovative products. • Increased consumer surplus if price competition occurs in markets and therefore increased welfare • If the entire industry grows, there will be benefits from external economies of scale. Potential drawbacks/possible evaluation includes: • Reduced economies of scale – if firms no longer produce at min. AC – productive inefficiency. This is crucial in airline industry, given large fixed costs of leasing and scope for huge economies of scale. (Loss of natural monopoly). • loss of dynamic efficiency with no LR supernormal profits to reinvest / lower R&D. • Competition may only be SR. In LR deregulation may lead to firms being knocked out of the industry by larger firms able to enjoy more significant economies of scale. Accept analysis of oligopoly where small a number of firms dominate the market.	**[20]**	***SEE EARLIER QWC DESCRIPTORS ON PAGE 2*** For level 4 answers, two sided economic analysis of the impact of increased competition is needed. Analysis: For L3, some use of economic theory is needed rather than just simple knowledge. For example, *"Increased competition raises supply (L2) which results in lower prices (L3)".* Accept accurate, relevant, diagrams for Level 3. Can gain level 3 / analysis for correct perfect competition diagram (showing efficiency) OR monopoly diagram (showing inefficiency). In terms of discussion, accept reference to the impact of competition in the airline market which has resulted in some firms trying to merge/collude in order to remain competitive.

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Question	Expected Answer	Mark	Rationale/Additional Guidance
	• Possible health & safety implications if firms attempt to lower their AC's • Cost cutting may also result in redundancies • Negative externalities (overcapacity and pollution?) • Firms have responded with mergers and collusion **Level 4 (a) [16-20]** For a discussion and judgement as to what impact greater competition will have on the airline market. Answers in L4(a) will be expected to develop economic arguments relating to why increased competition could be both positive and negative and then conclude as to whether the overall effect will be beneficial or not. **Level 4 (b) [11-15]** For a basic discussion of both the advantages and disadvantages of increased competition in airline markets but which fails to offer any judgement relating to the overall impact. For 14-15 there must be explicit reference to the airline market. **Level 3 [5-10]** For an analysis of <u>either</u> the benefits of increased competition or the drawbacks of it. Answers which fail to make reference to the airline market will gain 5-7 marks. **Level 2 [3-4]** For an application of knowledge and understanding of what the benefits of increased competition or the drawbacks of this could be. Answers in this level will simply identify some of the benefits OR costs without actually developing theory to support or analyse these points.		**Level 4(a):** Relevant judgement may include: • Which airline markets are being discussed? A rise in competition in the already competitive short haul market may have little effect whilst a rise in competition in long haul markets (eg transatlantic) will have a much bigger impact • It depends upon how long increased competition remains (ie is it SR or LR?) • How significant is the rise in competition? • Ultimately, whether or not consumers benefit depends upon how active government competition policy is in policing markets • It is the level of contestability rather than the level of competition which ultimately matters To gain 19-20 marks, clear application to the airline market must be used. **Level 4(b):** 14-15 marks: clear, two sided analysis <u>which makes explicit application to the airline market</u> 13 marks: clear, two sided economic analysis which includes no reference to the airline market whatsoever 11-12 marks: basic, unbalanced discussion with one side analysed more clearly than the other with OR without application to the airline market **Level 3:** 8-10 marks: clear use of economic analysis to analyse the impact of a rise in competition with explicit reference to the airline market 5-7 marks: relevant analysis which does not include reference to the airline market.

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Question			Expected Answer	Mark	Rationale/Additional Guidance
			Level 1 [1-2] For knowledge and understanding of what form increased competition could take or a simple understanding of what increased competition means (ie price/non price competition) BUT lacking any reference to what impact increased competition could have on markets.		

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Question			Expected Answer	Mark	Rationale/Additional Guidance
4	(a)		**Analyse what is meant by an integrated transport policy.** Answers should analyse policies which broadly attempt to integrate different modes of transport (inter-modal policies) and which attempt to integrate transport policy in to the environment in which it operates. Relevant examples include: through ticketing, park and ride schemes, bike and ride schemes, the building new transport infrastructure 'hubs' to bring together train, bus, car, tram and bicycles and the creation of a single transport authority within local authority areas in order to co-ordinate such policies. The use of road user charging and subsidies can also be seen as part of a wider, integrated strategy. In addition, policies which see greater direct control over transport by the government may be seen as relevant. **Level 3 [9-15 marks]** For an analysis of exactly what an integrated policy includes. Answers in this level must clearly analyse how such policies result in there being a link between modes. **Level 2 [5-8 marks]** For an application of knowledge and understanding of what an integrated policy would include. For example, at a basic level this may be a list of relevant policy examples. **Level 1 [1-4 marks]** For basic knowledge & understanding of what an integrated transport policy means in theory but lacking practical examples of how such a policy will be applied in reality: 3-4 marks: a clear definition of integration developed / explained without reference to examples 1-2 marks: simple definition – "a policy encompassing all modes of passenger & freight transport"	**[15]**	The key benchmark for analysis (L3) is whether candidates explain how the policy links two different modes of transport. Such an answer gains L3 whilst pure description of the policy gains L2. For example: *"Through ticketing is where the same ticket can be used on different modes of transport (L2). This means that people will be able to transfer between trains and buses more easily and will encourage them to do so (basic L3)"* *"Subsidies are payments made by government to encourage greater provision of transport services (L2). Subsidising infrastructure improves the ease for motorists changing between different modes and thus encouraging movements between modes (L3)."* Such analysis would clearly be enhanced with the clear application of economic terms and concepts. For example, simple supply and demand diagrams could be used to show how 'Park and Ride' schemes encourage greater bus use / shown by a rightwards shift of the demand curve for buses. **Level 3:** 13-15 marks: clear analysis of two policies 11-12 marks: basic analysis of two policies OR good analysis of one 9-10 marks: basic analysis of one policy only **Level 2:** 7-8 marks: Good application: identification and description of policies. 5-6 marks: Basic Application: identification of different policies.

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Question	Expected Answer	Mark	Rationale/Additional Guidance
(b)	**Discuss whether recent government policy has been successful in achieving an integrated transport policy** Accept a wide definition of 'recent government policy' to include privatisation & deregulation. More recently the 'Ten Year Plan' of 2000/2004 attempted to introduce an integrated solution to transport issues but many of the targets initially adopted in 2000 were not met and many of the policy suggestions within this were not implemented. More recently still, the Eddington Report has recommended increased investment in the rail network and increasing capacity on bus routes, the use of road pricing targeted at congested areas and the creation of an Independent Planning Commission to decide upon strategic projects. The government has also supported local authorities who have wished to introduce road pricing as part of a wider strategy of reducing car use by improving public transport infrastructure. That said, in many cases such as Edinburgh and Manchester, local residents have overwhelmingly rejected such proposals. **Level 4 (a) [16-20]** For a discussion which includes a judgement as to the extent to which recent transport policy could be deemed to be 'integrated'. Answers will be expected to develop analysis of why recent policy could be seen to integrated and then discuss the problems of this in practice. **Level 4 (b) [11-15]** For a basic discussion of whether or not recent policy could be deemed to be integrated or not. Answers in this level must analyse why it might successfully be seen as integrated and also discuss the problems of these policies		***SEE EARLIER QWC DESCRIPTORS ON PAGE 2*** **Level 4** – two sided analysis *Candidates analyse why the policy results in links / movements from one transport mode to another. This is then followed by criticisms of the policy which is underpinned with analysis. Accept <u>any</u> relevant economic evaluation of limitations of the policy.* **Level 4(a):** Possible 'judgement' includes: • The greater fragmentation of control in the transport sector, with more companies now involved in running transport services, both in the private and public sectors, means that it will be more difficult for government to co-ordinate a national, integrated response. Hence some policies which have fragmented the transport market may mean that integration has been harder to achieve. • The extent to which integration may be achieved depends upon the strength of political willpower as policies such as road pricing can prove to be very unpopular politically (evidenced by local referenda results). **Level 4(b):** Relevant discussion will include analysis of the limitations of individual policies which explain why an integrated policy may not be a reality. For example: • Deregulation has resulted in more private sector firms in the market. Hence national co-ordination of bus timetables is much harder – so more difficult to make journey connections with rail/tram/planes etc.

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Question			Expected Answer	Mark	Rationale/Additional Guidance
			Level 3 [5-10] For an analysis of whether recent government policy has been successful in achieving an integrated transport policy **Level 2 [3-4]** For an application of knowledge and understanding of what recent government policies include. Answers will be able to identify some recent government policies but will fail to apply the issue of integration here to look at whether or not they can be classed as being integrated. **Level 1 [1-2]** For knowledge and understanding of what recent government policy is.		• Road Pricing may not be set at the right level & therefore few will switch to other modes. • Subsidies and new 'transport hubs' may result in little rise in demand for public transport if people still perceive buses to be an inferior good and unreliable – hence not switching. 14-15 marks: very good evaluation - two recent government policies are discussed. 13 marks: good evaluation-clear discussion of one policy OR basic discussion of two policies. 11-12 marks: basic, unbalanced discussion, with one side analysed more clearly than the other **Level 3:** 8-10 marks: good analysis: very good analysis of one policy OR good analysis of 2 or more policies (this may be just critical analysis of policy only – a one sided answer) 5-7 marks: basic analysis: analyses one policy
			Section B total	**[35]**	
			Paper total	**[60]**	

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ADVANCED GCE
ECONOMICS
Transport Economics

F584

Candidates answer on the Question Paper

OCR Supplied Materials:
None

Other Materials Required:
- Calculators may be used

Wednesday 23 June 2010
Morning

Duration: 2 hours

OCE/12430

F584

Candidate Forename		Candidate Surname	

Centre Number						Candidate Number				

INSTRUCTIONS TO CANDIDATES

- Write your name clearly in capital letters, your Centre Number and Candidate Number in the boxes above.
- Use black ink. Pencil may be used for graphs and diagrams only.
- Read each question carefully and make sure that you know what you have to do before starting your answer.
- Answer Section A and **one** question from Section B.
- Do **not** write in the bar codes.
- Write your answer to each question in the space provided. If additional space is required, you should use the lined pages at the end of this booklet. The question number(s) must be clearly shown.

INFORMATION FOR CANDIDATES

- The number of marks is given in brackets **[ ]** at the end of each question or part question.
- The total number of marks for this paper is **60**.
- The quality of your written communication will be taken into account in the marking of your answer to Section B.
- This document consists of **16** pages. Any blank pages are indicated.

A calculator may be used for this paper

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Turn over

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Section A

Answer **all** questions.

Put UK airport expansion on hold, demands green group

The government should completely rethink its aviation policy and reject plans to build a third runway at Heathrow, according to a report by an influential body.

The Sustainable Development Commission (SDC) said there were big question marks over the environmental and economic arguments underpinning the proposals for airport expansion. "A lot of the basic data upon which important decisions are made is heavily contested. Our recommendation is that an independent assessment is undertaken", said a member of the SDC.

The report warned that some of the economic arguments behind airport expansion were uncertain, including one fiercely contested claim that adding a third runway at Heathrow would boost the UK economy by £5 billion a year. The report also claimed that the accuracy of environmental data was in doubt, with disputes over the impact of noise and air pollution on those living near to airports.

In response to the calls by the SDC, a government spokesman said "We fundamentally disagree with the findings of this report. It is simply wrong to claim that there is agreement that the evidence is flawed."

The Department of Transport has recently predicted a doubling in passengers using UK airports to 465 million passengers a year by 2030. It is soon expected to give the go ahead to the third runway at Heathrow.

Source: The Guardian, Wednesday 21st May, 2008, article by Dan Milmo and John Vidal (amended)

Fig. 1: Impact Assessment of Heathrow expansion*

Annual Social Costs	Private Cost Infrastructure	£6.18 – £7.6 bn
	External Cost Climate Change	£5.1 bn
Annual Benefit	£17.1 bn	

* Heathrow expansion includes adding a third runway and a new terminal around 2020.

Source: 'Adding Capacity at Heathrow', Annex B: Impact Assessment, Department for Transport (amended)

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1 (a) (i) Explain why the demand for air transport can be said to be a 'derived' demand.

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..... **[2]**

(ii) Explain **two** reasons why the demand for air travel is predicted to increase by 2030 (lines 14–15).

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2. .....

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..... **[4]**

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(b) Comment upon the extent to which the addition of a third runway would allow the owners of Heathrow airport to benefit from economies of scale.

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..... **[6]**

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(c) (i) Explain what is meant by 'cost-benefit analysis'.

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..... **[2]**

(ii) Using Fig. 1, calculate the annual social cost of Heathrow's proposed expansion.

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..... **[1]**

(iii) Identify **two** external benefits arising from the expansion of Heathrow airport.

1. .....

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2. .....

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..... **[2]**

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(d) Discuss the effectiveness of cost-benefit analysis for the government in making decisions on airport expansions.

.... **[8]**

Section A Total: [25 marks]

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Section B

Answer **one** question.

2 **(a)** Analyse, using a diagram, the market structure of a monopoly. **[15]**

(b) Discuss the effects of increased concentration in transport markets. **[20]**

3 **(a)** Analyse the characteristics of a contestable market. **[15]**

(b) Discuss the extent to which the deregulation of buses in the UK has been beneficial. **[20]**

4 **(a)** Analyse, using a diagram, how the existence of negative externalities results in market failure. **[15]**

(b) Discuss the effectiveness of regulation as a solution to the market failure arising from increased transport use. **[20]**

Section B Total: [35 marks]

Paper Total: [60 marks]

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Section B

Question No. .....

Start your answer to part **(a)** here

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Use this space for a diagram – if required

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[15]

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Start your answer to part **(b)** here

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[20]

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Additional pages. If you use this space, please make sure you number your answers carefully.

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Economics

Advanced GCE **F584**

Transport Economics

Mark Scheme for June 2010

Oxford Cambridge and RSA Examinations

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Section A

Question			Syllabus Ref	Expected Answer	Mark	Rationale
1	(a)	(i)		**Explain why the demand for air transport can be said to be a 'derived' demand.** 2 marks for a clear explanation applied to air transport such as: "air transport is a derived demand because the demand for air transport depends upon the demand for the products which it is carrying". Alternatively, award 1 mark for knowledge of what derived demand is: • Where a good is demanded because it is needed in the production of other goods. • Where a good is demanded for what it can do rather than what it is. • Where demand for one good depends upon the final output of another good. • Where the demand for one product comes from / stems from / depends upon the demand for another product. • Where a product is demanded for what it can do rather than what it is. 1 mark for valid application of this: For example, the simple idea that the higher the demand for products, the higher the demand for air transport is. OR a simple example such the greater the number of holidays taken / more people travelling overseas for work / more leisure time increasing numbers flying / people travelling more due to business meetings.	[2]	2 marks are available for a clear explanation which is applied to air transport. NOTE: answers which simply provide an economic definition of derived demand but lack any application to air transport gain only 1 mark Award 2 marks for applied explanations OR Award 1+1 for definition of derived demand which is then followed by application to air transport

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Question			Syllabus Ref	Expected Answer	Mark	Rationale
		(ii)		**Explain <u>two</u> reasons why the demand for air travel is predicted to increase by 2030 (lines 14–15).** One mark for the clear identification of each factor (up to a maximum of two marks). Relevant factors include: • increased disposable incomes / increased GDP / increased business activity • changes in tastes and fashion (and convenience) • the greater relative costs of substitute goods (eg rail travel) • lower price/cost of complementary goods (eg foreign holidays) • falling air fares • increased number of UK residents holidaying abroad • increased population • the building of new airports which make air travel more accessible • the increased number of firms in the industry / increase in number of budget airlines • greater congestion on roads which make car travel a less attractive alternative / air travel is becoming a better substitute to cars • accept references to the benefits from expanding Heathrow airport eg regional multiplier effects (as these represent increased economic growth locally) • extrapolation from previous trend data suggests that demand will continue rising • increased global trade • globalisation A further 1 mark for any reasonable development of why	[4]	Straight forward application of demand factors – accept responses from a passenger transport perspective. For each factors, mark as 2+2 with 1 mark for identification and 1 mark for explanation. Explanation of the factor must be linked in to air travel. For example, the simple statement that "higher incomes mean higher demand" receives only 1 mark for identification as there is no clear explanation. In contrast, an answer which says "higher incomes as consumers may therefore go on holiday more often and fly more" receives both marks. NOTE: for explanations, accept any basic but reasonable explanation of why demand may rise.

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Question			Syllabus Ref	Expected Answer	Mark	Rationale
				the identified point causes demand to rise.		

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Question			Syllabus Ref	Expected Answer	Mark	Rationale
	(b)			**Comment upon the extent to which the addition of a third runway would allow the owners of Heathrow airport to benefit from economies of scale.** 1 mark is available for knowledge with the clear identification of any economy of scale. These include: • financial • risk bearing • purchasing (accept bulk buying for identification) • technical • marketing • managerial DO NOT credit simple reference to internal/external EOS Up to 2 marks are then available for analysis of the gains from economies of scale: • 1 mark for explanation of why ANY economy of scale arises (for example, larger firms will be able to buy in greater bulk and therefore negotiate larger discounts OR larger firms have access to cheaper finance / lower interest rates as they borrow much more). NOTE: can analyse a different EOS to that identified already. • 1 mark for explicit recognition that the firm will benefit from lower / reduced / falling unit/ average costs of production OR that production will be at the point of lowest average costs (ACCEPT a diagram showing lower AC's which clearly labels economies of scale)	[6]	3 parts to this question – 1 mark for simple identification / knowledge 2 mark for the analysis of benefits 3 marks for discussion/comment as to potential problems NOTE: any one evaluative comment which is well developed can gain all three evaluation marks. *PLEASE USE COMMENT BOX TO ANNOTATE RESPONSE IN TERMS OF BREAKDOWN OF MARKS FOR AO1, AO3 AND AO4 HERE.* *PLEASE ALSO COMMENT BRIEFLY ON HOW AO4 MARK WAS ATTAINED.*

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Question			Syllabus Ref	Expected Answer	Mark	Rationale
				Up to a further 3 marks are available discussion: • Potential benefits from economies of scale are likely to be extremely high due to very high fixed costs involved with infrastructure provision (for example, with only one plane taking off from Heathrow, average fixed costs would be very high). Therefore, as output increases, average fixed costs (and AC's) will continuously decline. • The possibility of diseconomies of scale – firms expand too much and incur higher average costs. • With Heathrow already operating as one of the world's largest airports, the benefits of economies of scale may already have been experienced so little scope for further economies of scale. So current level of output is an issue. • Accept reference to specific economies of scale not gained (e.g. limited managerial economies)		For discussion, accept valid references to specific economies of scale which may not arise. Award explanations which provide plausible explanations for this e.g. may not necessarily benefit from marketing economies of scale because…….. Award one evaluative mark for a diagram which explicitly labels diseconomies of scale. If diseconomies of scale are developed for the evaluative factor, all three marks can be gained by identifying this as an issue and then developing in terms of examples e.g. control, co-ordination and communication issues

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Question			Syllabus Ref	Expected Answer	Mark	Rationale
	(c)	(i)		**Explain what is meant by 'cost-benefit analysis'.** 2 marks for a clear statement that it is a decision making tool which weighs up the relative social costs and benefits of different projects in order to calculate the net present value of a project 1 mark for the simple idea that it is a decision making tool OR that it weighs up costs and benefits OR that it is an attempt to take a long and a wide view of projects	**[2]**	Two elements are needed for both marks: 1. A clear idea that CBA is used to assess the viability of projects OR is a decision making tool / makes decisions / helps test viability of a project / helps prioritise schemes. 2. That it takes in to account all of the effects of a project over a period of time OR that it tries to weigh up all costs and benefits / pros & cons / advantages & disadvantages/ positive and negative effects of a project OR proceed if benefits>costs.
		(ii)		**Using Fig. 1, calculate the annual social cost of Heathrow's proposed expansion.** 1 mark for correctly identifying any figure within the range £11.28 – £12.7 billion	**[1]**	Accept any figure within range. NOTE: must include billions. Do not accept £11.28! DO accept correct answer without reference to £'s.

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Question			Syllabus Ref	Expected Answer	Mark	Rationale
		(iii)		**Identify two external benefits arising from the expansion of Heathrow airport.** 1 mark for each relevant example to a max. of 2 marks: • increased trade for local businesses • increased employment • possible increased productivity (due to reduced travel times) • increased N.I. / economic growth within the region / regional multiplier effects / increased economic activity in the London area (accept reference to the £5 billion of increased benefits referred to in the article) • increased international trade • increased inward investment / increased FDI • increased tourism (with more flights into Heathrow) • increased tax revenue for the government • economic benefits from increased labour mobility.	**[2]**	Does not necessarily need to draw upon case material, although this is one possible route. If both factors are correctly identified under subheading (1) in the answer booklet then still award both marks. NOTE: do not award marks for possible private benefits (e.g. increased profit / business for the contractors building the new runway / benefits to passengers using the airport / improvements to infrastructure). DO NOT reward any references to reduced external costs (e.g. lower congestion / pollution)

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Question			Syllabus Ref	Expected Answer	Mark	Rationale
	(d)			**Discuss the effectiveness of cost-benefit analysis for the government in making decisions on airport expansions.** A max. of 3 marks for analysis of how CBA works: CBA involves a comparison of costs and benefits of a project OR a comparison of the pros and cons OR advantages and disadvantages of a project (1 mark). CBA makes forecasts of future costs/benefits OR uses costs/benefits over a period of time (1 mark) CBA then attaches monetary values to factors (1 mark) CBA uses shadow prices (1 mark) CBA attaches weightings to different factors (1 mark) CBA will attach probabilities to uncertainties (1 mark) CBA results in those projects going ahead only where social benefit > social cost OR CBA involves the selection of projects where net social benefit is the greatest OR projects will only proceed if benefits>costs OR projects only proceed if net social benefit is positive OR if Net Present Value is positive (1 mark). By selecting those projects where SB>SC the benefit to society / social welfare / the gain to National Income will be maximised (1 mark). Up to 5 marks are available for discussion of problems which the government may face in undertaking CBA:	[8]	For analysis marks, do not award marks for the simple idea that "CBA helps with decision making" – expect analysis of <u>how</u> it does this. For evaluation marks, any two evaluative factors which are clearly developed can gain all 5 marks here with a maximum of 3 marks available for each evaluative factor which is developed. NOTE: there are no application marks here so no marks can be given for simply listing possible costs and benefits of the expansion. *PLEASE USE COMMENT BOX TO ANNOTATE RESPONSE IN TERMS OF BREAKDOWN OF MARKS FOR AO3 AND AO4 HERE.* *PLEASE ALSO COMMENT BRIEFLY ON HOW THESE MARKS WERE ATTAINED.*

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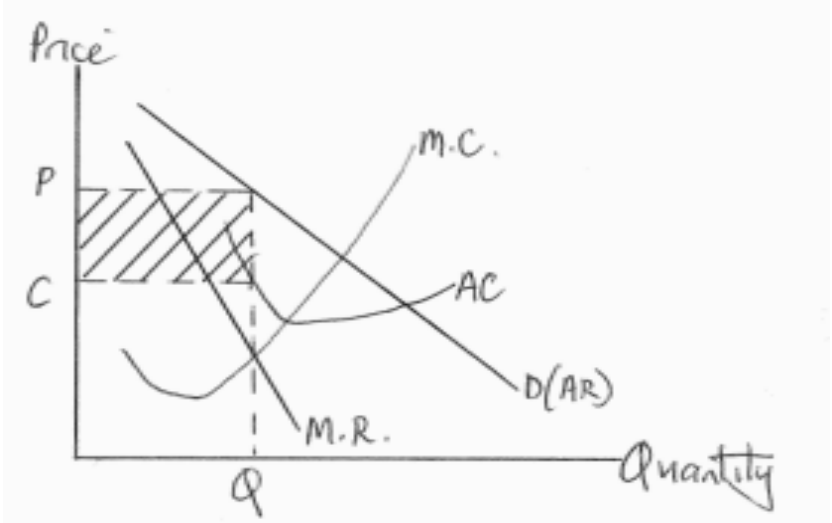
Question			Syllabus Ref	Expected Answer	Mark	Rationale
				• Which method of measurement should be used to estimate different costs and benefits? • Enumeration issues: Difficult to attach monetary values to costs/benefits, particularly external costs/benefits which are often intangible. e.g. how do you attach a monetary value to the loss of a view or the cost of increased noise? In this way, if the numerical estimates are incorrect then so too will be any decisions made on the basis of these. • Identification issues: Which costs and benefits should be included? How 'long' and how 'wide' should the scope of CBA be? In theory, as many costs and benefits should be included as possible, but is this practical? • What weightings should be included? This introduces an element of subjectivity in to CBA. Political considerations may well result in some factors being given higher/lower weightings than otherwise would be the case. • What values should be placed upon future costs and benefits in order to make a decision today? (In other words, what discount rates should be used?). • Possible political pressures on the government / government failure /possible bias • The effectiveness of CBA ultimately depends upon the accuracy of the data used.		One evaluative point well made can gain up to 3 marks For development of enumeration issues, accept relevant examples.

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Question			Syllabus Ref	Expected Answer	Mark	Rationale
				• High cost of CBA • Time taken to undertake the study Maximum 8 marks for question		

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Section B

Question			Syllabus Ref	Expected Answer	Mark	Rationale
2	(a)			**Analyse, using a diagram, the market structure of a monopoly.** Candidates should develop a clear diagram, as below. The explanation should develop relevant characteristics and/or behaviour of a monopolist including: • monopolists are single sellers of products • monopolists are price makers • there are a lack of close substitute goods • the existence of high barriers to entry • barriers to exit • production takes place where MC = MR • supernormal profits in LR • resulting equilibrium is productively inefficient • resulting equilibrium is allocatively inefficient • possible dynamic efficiency gains / economies of scale  	[15]	<u>In terms of rewarding diagrams</u>: 9 marks for a perfectly accurate diagram without any further explanation / analysis (bottom L3). No higher mark can be given until characteristics are analysed. 8 marks for a diagram which is partially accurate apart from one minor error (i.e. showing the incorrect profit area OR with no labelling of axes OR equilibrium points not labelled) which also has no development of written analysis. 7 marks for a diagram which is partially accurate apart from two minor errors. 5 marks for a partially accurate diagram, which as a minimum labels MR and AR correctly, with no written analysis. <u>In brief</u>: A partially correct diagram which is accompanied by relevant written <u>analysis</u> of monopoly characteristics can still reach Level 3 but will be limited to a maximum of 13 marks. Answers with diagrams which fail to label MR/AR (the minimum requirement) but have correct written analysis can gain 9 marks maximum. An answer with no diagram can gain 6 marks maximum. In such cases, award 5-6 marks only

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Question			Syllabus Ref	Expected Answer	Mark	Rationale
2	(a)			ACCEPT natural monopoly diag. applying same mark scheme **Level 3** [9–15] For a clear, accurate diagram and/or development of what are some of the characteristics of monopoly. For 13+ marks, a clear diagram must be accompanied by analysis of at least three characteristics. Relevant analysis may take the form of: Monopoly has high barriers to entry (L2). These mean that the monopolist can maintain supernormal profits into the long run because potential entrants will not be able to enter the market (L3). Alternatively, monopoly is the single seller of a product (L2). This means that the monopolist will be able to choose either the level of price or the level of output which is produced in the market and therefore is a price maker (L3). Likewise, a monopoly producer will face a lack of clear substitute goods to their product (L2) and therefore will be able to charge whatever price they wish knowing that they cannot be undercut by other suppliers (L3). Monopoly maximises profit where MC=MR (L2). Here the firm reduces output and increases price (compared to a competitive market) to make supernormal profit (L3). In other words, to move from L2 to L3 there must be some explanation of the characteristic either in terms of how it gives rise to monopoly OR why the characteristic arises (for example, accept analysis of why allocative inefficiency arises).		where relevant characteristics are identified. An accurate diagram plus very good analysis (ie two characteristics analysed) gains 13-15 marks. An accurate diagram with good analysis (ie one characteristic clearly analysed) gains 12 marks. An accurate diagram with basic analysis (ie one characteristic analysed in a basic manner) gains 10-11 marks. A partially accurate diagram plus very good analysis (i.e. two characteristics analysed) gains 12 marks. A partially accurate diagram with good analysis (i.e. one characteristic clearly analysed OR two or more characteristics analysed in a basic manner) gains 10-11 marks. A partially accurate diagram plus basic analysis (i.e. basic analysis of one characteristic) gains 9 marks. Finally, a diagram which fails to reach the minimum requirement of clearly labelling MR/AR but includes valid written analysis can gain 9 marks maximum.

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Question	Syllabus Ref	Expected Answer	Mark	Rationale
		Level 2 [5–8] For an application of knowledge and understanding of the characteristics of monopoly 8 marks: a diagram which shows the wrong profit area OR fails to label axes OR fails to label equilibrium points but is otherwise accurate. 7-8 marks: a partially accurate diagram (which as a minimum labels MR and AR correctly) which also identifies at least one relevant characteristic of monopoly. 5-6 marks: a partially accurate diagram (which as a minimum shows MR and AR correctly) with no characteristics identified. NOTE: A diagram which fails to clearly identify MR/AR but includes valid written analysis can gain 9 marks maximum. If no diagram is produced then a maximum of 6 marks will be available for applying different characteristics regardless of how good the written explanation of these is. **Level 1** [1–4]		Answers in Level 2 will include partially correct and basic diagrams which are not supported in any way by analysis of different characteristics but may just identify and/or explain them. A soon as a relevant characteristic of monopoly is explained then this reaches basic L2 (5). Answers in level 1 will simply identify and develop the basic definition of what a monopoly

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Question			Syllabus Ref	Expected Answer	Mark	Rationale
				For a knowledge and understanding of what monopoly is.		is.
	(b)			**Discuss the effects of increased concentration in transport markets.** Conventional economic theory suggests that greater concentration may well be accompanied by a reduction in competition in markets, but clearly this depends upon the number and size of firms remaining in the market. Relevant analysis may well take the form of looking at monopoly or oligopoly market structures and analysing the possible drawbacks of such structures in terms of economic inefficiency before looking at what the positive effects could be, for example the benefits from economies of scale (natural monopoly), dynamic efficiency gains, the use of supernormal profits for investment purposes and also supernormal profits providing an incentive to innovate. Level 3 answers will be one sided answers which focus entirely on the benefits or drawbacks of increased concentration only. Accept relevant theory of the firm for Level 3 in analysing whether or not increased concentration will be good or bad. **Level 4 (a)** [16–20] For a discussion which includes a judgement as to the impact of increased concentration in transport markets. Relevant comments may include the fact that it depends upon the extent	**[20]**	NOTE: ANSWERS WHICH DISCUSS IMPACT IN TERMS OF <u>INCREASED</u> COMPETITION RECEIVE 15 MARKS MAXIMUM For level 4 there must be a two sided discussion – in other words, analysis of why increased concentration is bad and also good. In other words, Level 4 answers will develop both sides of the issue by looking at the advantages and disadvantages of greater concentration. Relevant judgement MUST already be based upon a two sided discussion. Possible judgement <u>could</u> include: • the impact of increased concentration may depend upon the extent to which transport markets are regulated • the impact may depend upon the extent to which existing dominant firms fear entry by other firms (ie degree of contestability) • the impact may depend upon exactly how many firms there are in the market. (For example, despite a rise in concentration, if there are still a number of firms fiercely

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Question	Syllabus Ref	Expected Answer	Mark	Rationale
		of increased concentration and also the existing threat of possible entry by new firms (suggesting that there is a contestable market) and the nature of remaining competition in the market (ie price or non price) **Level 4 (b)** [11–15] For a discussion of the impact of increased concentration which makes no attempt at developing judgement. A two sided answer. In other words, answers in this level will look at why increased concentration is both good and bad OR may take the form of a theoretical answer looking at why perfect competition is good and monopoly is bad. Complex ideas have been expressed clearly and fluently using a style of writing which is appropriate to the complex subject matter. Sentences and paragraphs, consistently relevant, have been well structured, using appropriate technical terminology. There may be few, if any, errors of spelling, punctuation and grammar. **Level 3** [5–10] For analysis of the benefits OR costs of increased concentration. This answer may well be based upon 'theory of the firm', analysing monopoly or oligopoly markets and the impact that different market structures will have. Any relevant economic analysis should be rewarded here. NOTE: an answer which simply states that "prices rise" does not get L3 but when explained i.e. why this occurs will get L3.		competing against each other then a more competitive market structure may exist in reality). 14-15 marks will be rewarded where there is clear, two sided discussion 11-13 marks will be awarded where there is basic or unbalanced discussion with the second side of the argument developed only in a very basic manner Accept accurate theory of the firm diagrams as relevant analysis to reach Level 3. For 8-10 marks candidates have to analyse more than one effect of increased concentration (note that analysis of different types of efficiency are classed as separate points). 5-7 marks: basic analysis of only one effect of

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Question			Syllabus Ref	Expected Answer	Mark	Rationale
				Relatively straightforward ideas have been expressed with some clarity and fluency. Arguments are generally relevant, though may stray from the point of the question. There will be some errors of spelling, punctuation and grammar, but these are unlikely to be intrusive or obscure meaning. **Level 2** [3–4] For an application of knowledge and understanding of the impact of greater market concentration Answers in this level may well simply identify that greater market concentration suggests that there will be less competition OR a more monopolistic or oligopolistic market structure. Answers at the top of this level will develop some understanding of these market structures without actually analysing the impact of changes. Some simple ideas have been expressed in an appropriate context. There are likely to be some errors of spelling, punctuation and grammar of which some may be noticeable and intrusive **Level 1** [1–2] For knowledge and understanding of what market concentration refers to. Some simple ideas have been expressed. There will be some errors of spelling, punctuation and grammar which will be noticeable and intrusive. Writing may also lack legibility.		increased concentration Answers in this level may simply identify different characteristics of market structures or make relevant application to market structures within transport. For example, bus provision is usually highly concentrated in the hands of a few oligopoly providers.

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Question			Syllabus Ref	Expected Answer	Mark	Rationale
3	(a)			**Analyse the characteristics of a contestable market.** A contestable market is one where potential firms can influence the behaviour of existing firms and where there is always the threat of possible entry. Relevant characteristics include: A lack of barriers to entry A lack of barriers to exit A market which is open to 'hit and run' competition The absence of sunk costs (according to Baumol, this is a crucial characteristic) Firms have access to the same type of technology A lack of brand loyalty All firms having the same cost structure (ie an absence of economies of scale) Lack of collusion (i.e. no price fixing) Perfect knowledge exists The number of firms in the market is not important / is irrelevant Only makes normal profit in the long run	[15]	A response which simply identifies several different characteristics of a contestable market will gain Level 2. For Level 3, candidates will be expected to analyse in a basic manner how the given characteristic results in the market being contestable. For example, "Contestable markets are characterised by a lack of brand loyalty (L2) meaning that existing firms in the market have no hold over customers and therefore new firms entering the market can gain market share (L3)" OR "There is a lack of barriers to entry (L2) which means that it is easy for firms to enter the market (L3)" In other words, to move from L2 to L3 and to gain analysis marks there must be very clear explanation of why the characteristic results in a contestable market occurring. To gain 13-15 marks - very good analysis (two or more characteristics are analysed) 11-12 marks - good analysis (one characteristic analysed clearly OR two characteristics analysed in a basic manner) 9-10 marks - basic analysis (one factor analysed in a basic manner)

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Question			Syllabus Ref	Expected Answer	Mark	Rationale
				Level 3 [9–15] For a clear explanation of what contestability is which clearly analyses the role played by these characteristics. In other words demonstrating how these factors result in markets being contestable. For 13+ marks answers will be expected to analyse two or more characteristics **Level 2** [5–8] For an application of knowledge and understanding of what contestability is. Answers in this level may well provide simple, accurate definitions which make reference to examples of barriers to entry but fail to analyse and explain how these lead to reduced contestability **Level 1** [1–4] For knowledge and understanding of what contestability is. For example, a relevant example of a barrier to entry without any further development/explanation. Answers towards the top of this level may provide simple examples of contestable markets.		FOR L3 accept diagrams but only those which show the clear transition between short and long run with abnormal profit being competed away to just normal profit. Any answer which correctly identifies / explains one relevant characteristic but fails to analyse it will gain 5 marks. If two or more characteristics are identified but not analysed then 7-8 marks will be rewarded.

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Question	Syllabus Ref	Expected Answer	Mark	Rationale
(b)		**Discuss the extent to which the deregulation of buses in the UK has been beneficial.** Bus deregulation involved the removal of legal barriers to entry which required firms to prove that there was a "need" for additional services to be provided. By removing this barrier to entry, the government hoped that increased competition would improve service quality, reduce fares and increase bus usage. Benefits of bus deregulation include: Possible efficiency gains (private firms have the incentive to lower costs of production; for example, running smaller 'Hopper' style buses with some estimates suggesting that costs have fallen by as much as 30%). More buses are running and the number of kilometres travelled by buses since deregulation has increased (although these often involve the duplication of existing services on profitable routes). Finally, economic theory suggests that where there is greater competition then there will also be a greater incentive to innovate and to compete on both price and non-price methods. The potential drawbacks to deregulation include: What is the resulting market structure in the bus industry? Usually oligopoly or, in some cases, duopoly. In these circumstances, consumers do not necessarily benefit with resulting higher fares (loss of consumer surplus?).	[20]	NOTE: deregulation did not occur in London. Following deregulation throughout the rest of the UK, London's buses were franchised out. Award Level 3 for one sided economic analysis BUT if just simple factual knowledge of deregulation is given then just award Level 2.

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Question	Syllabus Ref	Expected Answer	Mark	Rationale
		A wider issue remains that deregulation has arguably made it more difficult to achieve a national, integrated solution to road congestion as there are now many more private sector firms involved in the bus industry. Whilst there has been increased competition in some parts of the country, this has tended to be only short term and the bus industry has moved towards an oligopoly market structure with a few large private sector firms dominating the market. With predatory pricing and the existence of significant economies of scale benefiting existing dominant firms, significant barriers to entry exist and, therefore, the bus industry is less contestable than theory suggests. **Level 4 (a)** [16–20] For a discussion which includes a judgement as to how beneficial deregulation has been. The best answers may conclude that the impact of deregulation varies from one part of a country to another depending upon how contestable local markets have become. **Level 4 (b)** [11–15] For a basic discussion of how beneficial deregulation has been but lacking relevant judgement as to overall whether it has been beneficial or not Complex ideas have been expressed clearly and fluently using a style of writing which is appropriate to the complex subject matter. Sentences and paragraphs, consistently relevant, have been well structured, using appropriate technical terminology.		<u>Possible judgement could include</u>: The impact of deregulation varies from area to area and totally depends upon the extent to which it has resulted in greater competition in that locality The impact of deregulation will depend upon the extent to which other barriers to entry (e.g. predatory pricing) remain. Two sided answers which analyse whether deregulation has and has not been successful. 14-15 marks will be rewarded where there is balanced discussion 11-13 marks where there is unbalanced or basic

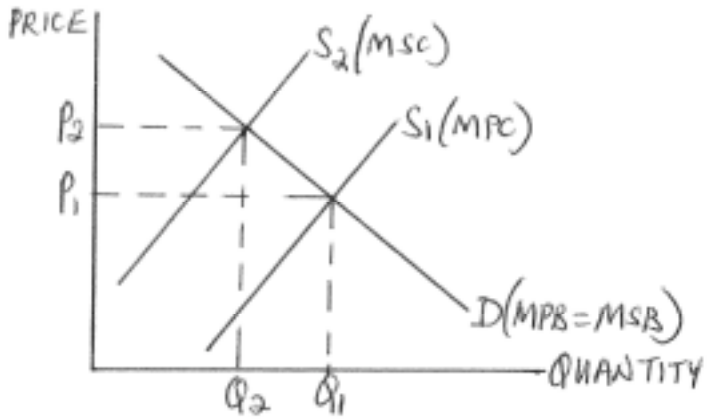
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Question	Syllabus Ref	Expected Answer	Mark	Rationale
		There may be few, if any, errors of spelling, punctuation and grammar. **Level 3** [5–10] For one-sided analysis of the impact of deregulation. Answers might analyse the theoretical benefits of deregulation (in terms of greater competition arising from the removal of barriers to entry) or analyse the disadvantages, perhaps with reference to monopoly / oligopoly markets. Relatively straightforward ideas have been expressed with some clarity and fluency. Arguments are generally relevant, though may stray from the point of the question. There will be some errors of spelling, punctuation and grammar, but these are unlikely to be intrusive or obscure meaning. **Level 2** [3–4] For an application of knowledge and understanding of the impact of deregulation. Answers in this level will explain the theory of deregulation and show some knowledge of the policy but not analyse the benefits or drawbacks at all. For example, may just recognise that the market has become oligopolistic. Some simple ideas have been expressed in an appropriate context. There are likely to be some errors of spelling, punctuation and grammar of which some may be noticeable and intrusive. **Level 1** [1–2] For knowledge and understanding of what deregulation is but lacking any relevant explanation of this in practice. Answers in this level will may consist only of a simple definition which lacks any clear development/explanation. Some simple ideas have been expressed. There will be some		discussion. 8-10 marks will be awarded where more than one impact is analysed (note that different types of economic efficiency are separate factors) 5-7 marks for analysis of only one impact (for example, simple recognition that monopoly / oligopoly may result in prices rising = 5 marks) Level 2 responses will fail to analyse the impact of deregulation but will develop how deregulation occurred OR identify a possible benefit (eg lower costs / increased service provision) OR a possible drawback without analysing it.

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Question			Syllabus Ref	Expected Answer	Mark	Rationale
				errors of spelling, punctuation and grammar which will be noticeable and intrusive. Writing may also lack legibility.		

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Question			Syllabus Ref	Expected Answer	Mark	Rationale
4	(a)			**Analyse, using a diagram, how the existence of negative externalities results in market failure.** In a free market economy, producers only take into account the private costs of production and, therefore, over-produce goods because they totally ignore external costs. This over-production results in too many of these goods being supplied by firms and, therefore too many scarce resources being used in production. Hence, there is allocative inefficiency and the resulting misallocation of resources results in market failure.  NOTE: • Area of welfare loss <u>does not</u> need to be shown • Accept labelling of axes as cost v output • BUT labelling of Q2 must lie to left of Q1 and, likewise, P2 must be above P1 (ALTERNATIVELY, accept a diagram illustrating the negative external benefit approach with MPB>MSB)	[15]	Any diagram which is perfectly accurate will immediately gain 9 marks without there being any written analysis. A diagram with one minor error e.g. no labelling of axes OR no labelling of equilibrium. Points = 8 marks. A diagram with two minor errors = 7 marks. To gain 5 marks (ie Level 2) for the diagram <u>it must show MPC/MSC correctly</u> (or if negative ext. benefit approach taken, MPB/MSB) NOTE: written analysis can only gain L3 if there is a partially or fully correct diagram. <u>Relevant analytical points needed include</u>: 1. Consumers ignore such external costs / do not take into account full social costs / only take into account private costs (L2) and therefore price is <u>too low</u> (L3). [Accept clear reference to a diagram showing P_1/P_{FM} is below P_2/P_S]. 2. Over-consumption occurs (L2) because price is too low and hence demand is higher (L3) OR because consumers ignore external costs / don't pay the true costs and demand more (L3). 3. This results in allocative inefficiency / a misallocation of resources (L2) as too

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Question			Syllabus Ref	Expected Answer	Mark	Rationale
				Level 3 [9–15] For an accurate diagram accompanied by a clear explanation of why market failure arises. Candidates recognise that there will be over-consumption which results in allocative inefficiency and a misallocation of resources. For 13+ marks candidates will be expected to clearly analyse **why** two factors arise. **Level 2** [5–8] For an application of knowledge and understanding of why market failure arises from negative externalities. 7-8 marks will be awarded for a partially correct diagram accompanied by <u>identification</u> of the fact that there will be over-consumption OR allocative inefficiency OR a misallocation of resources but lacking any analysis of these points. 5-6 marks for a partially correct diagram (which as a minimum shows MPC/MSC correctly) with no relevant factors identified in the written work. A maximum of 6 marks will be received by an answer <u>without</u> a diagram. A diagram which fails to clearly identify MPC/MSC (or S1/S2) but includes written analysis can gain 9 marks maximum. **Level 1** [1–4] For a knowledge and understanding of why market failure arises. Answers in this level will show some understanding of what a negative externality is but will fail to develop this at all. A basic definition will receive no more than 2 marks. A more		many scarce resources are used up in production (L3) OR P>MC (L3). 13-15 marks: An accurate diagram plus good analysis of two points. 12 marks: an accurate diagram with good analysis of one point OR a partially accurate diagram with good analysis of two points. 10-11 marks: An accurate diagram with basic analysis of one factor OR a partially correct diagram with good analysis of one point. 9 marks: an accurate diagram with no relevant analysis OR a partially accurate diagram with basic analysis of one factor.

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Question			Syllabus Ref	Expected Answer	Mark	Rationale
				detailed definition referring to SC>PC can gain up to 4 marks.		
	(b)			**Discuss the effectiveness of regulation as a solution to the market failure arising from increased transport use.** Possible examples of regulation include stringent controls on car emissions, restrictions on car use and the ultimate sanction of banning cars in certain parts of urban areas. Real world examples include MOT's and the London Emissions Zone. All of these policies are backed by the force of law and, therefore, can result in individuals being fined / prosecuted. Discussion of regulation could involve reference to: • The costs of policing and enforcing such regulations. This could be extremely high and, therefore, could involve a considerable opportunity cost • Revenue fails to produce a revenue stream for the government and in fact costs money to enforce • The difficulties of deciding what exact level of regulation to introduce. For example, what should the legal maximum level of car emissions be? What standard should the government set? • How big should the fines be? If they are set too low, then the regulations/laws will be ineffective • Regulation is a non-market based solution • The need for regulations to be introduced on an international basis to avoid companies moving overseas to avoid tougher regulations.	**[20]**	Level 4 answers must include clear, two sided analysis of regulation itself. DO NOT accept discussion of other methods of government intervention. Accept tradeable permits as a form of regulation. Relevant analysis requires reference to how permit system operates. Accept maximum prices (price caps) as relevant examples as these could be applied to public transport. Therefore relevant analysis here is the aim to lower prices / extend demand. Given the legislative basis to road pricing, award a maximum of 7 marks where candidates discuss road user charging / road pricing (to reach 5-7 marks there must be clear analysis of how it is used).

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Question	Syllabus Ref	Expected Answer	Mark	Rationale
		• Regulations may create barriers to entry **Level 4 (a)** [16–20] For a discussion which includes a judgement as to how effective regulation would be in correcting market failure. This judgement will be based upon clear, two sided discussion. **Level 4 (b)** [11–15] For discussion of the effectiveness of regulation - a two sided answer but lacking relevant judgement. Complex ideas have been expressed clearly and fluently using a style of writing which is appropriate to the complex subject matter. Sentences and paragraphs, consistently relevant, have been well structured, using appropriate technical terminology. There may be few, if any, errors of spelling, punctuation and grammar.		Relevant judgement may include: • The effectiveness of regulation ultimately depends upon the extent to which it is enforced by the authorities • The effectiveness may also depend upon the degree to which there is international co-operation between countries in introducing this • Effectiveness of regulation will be enhanced by combining it with other measures as part of an integrated solution 14-15 marks: clear, two sided discussion 11-13 marks: basic / unbalanced discussion
		Level 3 [5–10] For analysis of a one-sided answer. In other words, analysis of how regulation works OR the limitations of it. For example, faced with the threat of being fined, an individual may change behaviour and therefore, the negative externality can be reduced. In other words, fines/prosecution provide an incentive for individuals to change their behaviour. Accept analysis in terms of supply curve shifting left only when explained in terms of regulation increasing costs of production therefore resulting in a rise in price. Relatively straightforward ideas have been expressed with some clarity and fluency. Arguments are generally relevant, though may stray from the point of the question. There will be		8-10 marks: clear analysis of one side e.g. candidates clearly analyse <u>how</u> fines and the threat prosecution may result in individuals changing their behaviour e.g. fines provide a deterrent to law breaking OR provide clear analysis of the limitations of regulation 5-7 marks: basic analysis of one side. For example, regulation may reduce market failure due to fines resulting in changed behaviour OR revenue from regulation may be spent on subsidising public transport, hence switching modes OR basic analysis of one limitation

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Question			Syllabus Ref	Expected Answer	Mark	Rationale
				some errors of spelling, punctuation and grammar, but these are unlikely to be intrusive or obscure meaning. **Level 2** [3–4] For an application of knowledge and understanding of how regulation could be used. Simple examples of regulation will be given and explained without any clear analysis of how regulation works in providing an incentive for individuals to change their behaviour. Some simple ideas have been expressed in an appropriate context. There are likely to be some errors of spelling, punctuation and grammar of which some may be noticeable and intrusive. **Level 1** [1–2] For knowledge and understanding of what regulation is, lacking any relevant application, analysis or evaluation. Some simple ideas have been expressed. There will be some errors of spelling, punctuation and grammar which will be noticeable and intrusive. Writing may also lack legibility.		Relevant examples of regulation in transport. One relevant example of regulation = 3 marks but can gain 4 marks if explained. Simple definitions of regulation only.

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Assessment Objectives Grid (including QWC)

Question	AO1	AO2	AO3	AO4	Total
1 (a) (i)	1	1			**2**
(a) (ii)	2	2			**4**
(b)	1		2	3	**6**
(c) (i)	2				**2**
(c) (ii)		1			**1**
(c) (iii)		2			**2**
(d)			3	5	**8**
2(a)/3(a)/4(a)	4	4	7		**15**
2(b)/3(b)/4(b)	2	2	6	10	**20**
Totals	**12**	**12**	**18**	**18**	**60**

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ADVANCED GCE
ECONOMICS
Transport Economics

F584

Candidates answer on the Question Paper

OCR Supplied Materials:
None

Other Materials Required:
- Calculators may be used

Friday 29 January 2010
Afternoon

Duration: 2 hours

OCE/12429

F584

Candidate Forename		Candidate Surname	

Centre Number						Candidate Number				

INSTRUCTIONS TO CANDIDATES

- Write your name clearly in capital letters, your Centre Number and Candidate Number in the boxes above.
- Use black ink. Pencil may be used for graphs and diagrams only.
- Read each question carefully and make sure that you know what you have to do before starting your answer.
- Answer Section A and **one** question from Section B.
- Do **not** write in the bar codes.
- The spaces should be sufficient for your answers but if you require more space use the lined pages at the end of this booklet and number your answers carefully.

INFORMATION FOR CANDIDATES

- The number of marks is given in brackets **[ ]** at the end of each question or part question.
- The total number of marks for this paper is **60**.
- The quality of your written communication will be taken into account in the marking of your answer to Section B.
- This document consists of **16** pages. Any blank pages are indicated.

A calculator may be used for this paper

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Turn over

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Section A

Answer **all** questions.

Road congestion and road pricing

On 28 November 2007, the RAC Foundation, a motoring lobby group, released a forecast of traffic growth. This forecast predicted that there would be a 37% increase in demand for road space by 2041. As road building has declined steadily over the past two decades, this does not bode well for future levels of congestion.

Until recently there was agreement about what should be done. The government accepts the argument, long advanced by academics and environmentalists, that simply building more roads is not enough. In 2004, the Transport Secretary raised the idea of a national road-pricing scheme designed to address the demand for road space.

A pricing scheme would solve the biggest problem faced by motorists: the lack of a proper way to allocate capacity. The current tax system penalises higher polluting cars and those which consume more fuel, however, congestion costs still go unpaid. In the absence of charging for road space, capacity is, indeed, rationed by delays and queues.

Nevertheless, despite its appeal to economists, the idea of road pricing seems to have been sidelined, largely because motorists seem to prefer queuing for road space rather than paying for it. The turning point came in February 2007 when a petition opposing road-pricing, posted on the Downing Street website, attracted 1.8 million signatures – six times more than any other subject. Yet national road pricing need not be a political death sentence. The RAC Foundation report supports a different scheme whereby fuel duty is abolished and replaced with a carbon charge. Motorists would then pay per kilometre travelled, depending upon how busy the road. In this way, city drivers would pay more, while country drivers – or those who avoid the rush hour – would pay less.

Source: 'The Economist', 29th November, 2007, 'Road Pricing: Wrong way' (amended)

Fig. 1: UK Passenger transport by mode, 1981–2006

(Billion passenger kilometres)

	Bus and coach	Cars*	Rail	Air
1981	48	394	34	2.8
1986	47	465	37	3.7
1991	44	582	39	4.8
1996	43	622	39	6.3
2001	47	654	47	7.7
2006	50	686	55	9.9

* also includes vans and taxis

Source: Transport Statistics Great Britain 2007 'Passenger transport by mode 1952-2006' (amended)

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1 **(a)** The data in Fig. 1 shows a clear rise in the use of cars over the period 1981–2006.

(i) State **three** possible reasons for the rise in the use of cars over this period.

1. .....

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2. .....

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3. .....

..... **[3]**

(ii) Identify **one** other trend shown in Fig. 1.

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..... **[1]**

(b) **(i)** Identify **two** possible negative externalities arising from increased road congestion.

1. .....

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2. .....

..... **[2]**

(ii) Explain why road congestion represents an example of market failure.

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(iii) Comment upon whether a national road-pricing scheme would reduce congestion.

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..... **[6]**

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(c) Discuss whether giving increased subsidies to firms providing bus services would correct the market failure arising from urban road congestion.

.... [8]

Section A Total: [25 marks]

Turn over

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Section B

Answer **one** question.

2 **(a)** Analyse how and why economists forecast future growth in transport demand. **[15]**

(b) Discuss the effectiveness of different methods used by economists to attach monetary values to the external costs and benefits arising from the use of transport. **[20]**

3 **(a)** Analyse the economic arguments for rail privatisation. **[15]**

(b) Discuss the extent to which a monopoly provider of transport will always increase economic efficiency. **[20]**

4 **(a)** Analyse, using examples, what is meant by a more sustainable transport policy. **[15]**

(b) Discuss whether recent government transport policies could be deemed to be more 'sustainable'. **[20]**

Section B Total: [35 marks]

Paper Total: [60 marks]

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Section B

Question No. .....

Start your answer to part **(a)** here

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Start your answer to part **(b)** here

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Additional answer space

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GCE

Economics

Advanced GCE **A2 H461**

Advanced Subsidiary GCE **AS H061**

Mark Schemes for the Units

January 2010

HX61/MS/R/10J

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F584 Transport Economics

Section A

Question	Expected Answer	Marks	Rationale
1 (a)	**The data in Fig. 1 shows a clear rise in the use of cars over the period 1981-2006.**		
(i)	**State three possible reasons for the rise in the use of cars over this period**	**[3]**	***Please use a tick to show each time a mark is rewarded***
	1 mark for any relevant factor, for example: • increased price of substitute goods (eg trains) / increased price of public transport OR a reduction in the number of available substitutes to cars OR poor quality substitute goods • lower prices of cars OR lower taxes OR increased affordability • lower real prices of running cars • increased disposable incomes / GDP / wealth (making cars more affordable) • changes in tastes and fashion (away from public transport to cars) • people travelling further to work OR shop • increased employment levels • lower fuel prices / lower running costs • population growth or greater immigration • increased car ownership (which, in turn, enables greater use) • accept references to the road building programme 3 marks maximum.		**Accept any relevant, plausible factors** **If two valid answers are given under "Point 1" of answer booklet then award 2 marks still** **NOTE: question asks for any POSSIBLE factor so it does not need to have actually happened!** **DO NOT accept reference to the greater convenience of cars as this has always been the case, so cannot account for the change!** **Simple statement that there is 'derived demand' unless further developed = 0**
(ii)	**Identify one other trend shown in Fig. 1**	**[1]**	
	1 mark for stating that there was a rise in air travel. 1 mark for stating that overall there was a rise in rail travel. 1 mark for stating that there was a rise in bus and coach travel Maximum of 1 mark available.		**Accept any comment related to a subsection of data eg only 1986-1996**

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Question	Expected Answer	Marks	Rationale
(b) (i)	**Identify two possible negative externalities arising from increased road congestion**	**[2]**	
	1 mark for identifying each possible externality to include: • environmental damage • visual pollution / blight • noise pollution • air pollution • lost business to firms • time lost: workers late for work and hence lost output / lower productivity OR simple reference to increased journey times • increased accidents • increased stress • accept reference to the fact that motorists face increased costs due to congestion • increased health problems • wear and tear (accept this as it could be a cost imposed upon others too) • increased costs to firms / businesses • damage to buildings OR infrastructure • reduced house prices near areas of congestion 2 marks maximum.		**Again, accept any relevant factors** **Accept two different examples of pollution for 2 marks eg noise and air pollution will gain 2 marks** **If two valid answers are given under 'point 1' in answer booklets then still reward 2 marks** **Accept simple reference to "pollution" for 1 mark but don't award a second mark if second statement is "air pollution"**

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Question	Expected Answer	Marks	Rationale
(ii)	**Explain why road congestion represents an example of market failure**	**[5]**	
	Up to 3 marks are available for knowledge: It is a cost / negative externality / impact imposed upon a 3rd party OR SC>PC *(Accept a diagram which clearly shows SC>PC)* (1 mark) There will be overproduction / overconsumption (1mark). This represents allocative inefficiency OR any reference to the fact that resources will not be allocated efficiently OR a definition of market failure relating to imperfect or non optimum allocation of resources (1 mark) There is a misallocation of resources (1 mark) A maximum of 3 marks are available for knowledge Up to 2 marks are available for application: Consumers don't pay the full / true cost of their actions OR they ignore external costs OR don't internalise external costs / negative externalities OR don't take into account the full social cost OR the free market ignores the impact upon the 3rd party (1 mark) Price paid is therefore lower OR products underpriced OR price is too low. *(Accept a clear diagram showing that the free market price will be lower)* (1 mark) Too many scarce resources being used to produce goods and services (1 mark) A maximum of 2 marks are available for application		**No knowledge mark for simple idea of lower efficiency without clear reference to allocative inefficiency** **Note: a purely theoretical answer without any application will only gain 3 marks**

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Question	Expected Answer	Marks	Rationale
iii	**Comment upon whether a national road-pricing scheme would reduce congestion**	**[6]**	
	1 mark for simple knowledge of what road pricing is. For example: A direct charge for using the road (1 mark) The price for using the road (1 mark) This involves drivers paying to drive along the roads (1 mark) Where drivers are charged for the journey / per mile driven / charged varying amounts throughout the day (1 mark) An extra cost for using the road (1 mark) Up to 2 marks are available for analysis of how this would work: 1 mark for stating that the supply curve shifts <u>to the left</u> (if not already shown on a diagram) 1 mark for recognising that there will be a contraction of / lower demand for car use OR people switch to other modes of transport OR people don't drive as much OR it puts people off driving 1 mark for recognising that this reduces the overconsumption 1 mark for recognising that here the 'polluter pays'. 1 mark for stating that the road charge will force the polluter to internalise the external costs of their actions Alternatively, award 2 analysis marks for an accurate diagram: 1 mark for leftwards shift of supply and 1 mark for reduction in equilibrium quantity		**3 parts to this question:** **1) Knowledge of what it is** **2) Analysis** **3) Relevant comment/evaluation.**

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Question	Expected Answer	Marks	Rationale
	Up to 3 marks are then available for comment/evaluation of road-charging. One point of evaluation which is well developed can gain all 3 marks as can 3 evaluative points which are not developed. Possible evaluative points include: • Charging on motorways may just displace traffic on to side roads/'A' and 'B' roads and therefore may only move the congestion • At times of rising incomes, road charging will have less impact due to greater prosperity • With inelastic demand for car use, demand will fall very little • There needs to be an alternative for road users to switch to otherwise there will be no change in demand for car use OR an alternative to car use needs to exist such as public transport. Therefore revenues raised from road pricing should be hypothecated (into alternatives) • If people see the public transport alternative as unpleasant then they won't switch to it • A flat rate charge may not be effective in deterring high income groups from driving but would deter low income groups • Ultimately the size of the charge will determine how effective it is. • The costs of the scheme could be very significant. To be effective, the government may well incur huge set up costs • To be effective such a scheme must be enforced • Significant enforcement costs may also exist		**Once any relevant point of evaluation has been recognised, award a second mark where there is basic, but valid, development of this** **Do not reward the idea that road pricing may give rise to privacy issues and concerns over undue intrusion as neither of these points directly relate to the use of road pricing in correcting road congestion.** **Likewise, do not award the simple statement that it may be regressive BUT do reward comments that high income groups may not be deterred from driving by it.**

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Question	Expected Answer	Marks	Rationale
(c)	**Discuss whether giving increased subsidies to firms providing bus services would correct the market failure arising from urban road congestion**	[8]	
	Up to 3 marks for simple analysis of the impact of production subsidies: Such a subsidy effectively lowers costs of production (1 mark) This will shift the supply curve for bus services to the right OR increased supply / quantity / production / increased number of services / increased bus provision(1 mark) Subsidies will therefore result in lower prices OR lower fares OR lower charges (1 mark) There is an extension of demand OR greater consumption OR more people use buses OR greater use of public transport (1 mark) (An accurate diagram which shows increased supply, lower price and increased quantity can gain all 3 analysis marks). Up to 5 marks are available for relevant discussion/evaluation to include: • Inelastic PED <u>for buses</u>- subsidy has to be very big to have an noticeable impact on demand. Do not accept PED for cars • Impact also depends upon Cross Elasticity of Demand (XED) which needs to be positive and also, ideally, highly elastic • The cost of such a subsidy to the government may well mean that this policy will be ineffective (possible opportunity cost issues?) • Size of subsidy? If too small then fares will not fall sufficiently • If some forms of public transport are perceived to be inferior goods (with negative income elasticity of demand) then lower prices will not help to raise demand significantly during times of rising incomes		**Accept capital subsidy arguments as well as fare subsidies. Here 3 analysis marks for:** **1. cheaper capital costs** **2. new OR improved vehicles** **3. increased demand** **Note: reward simple definitions of subsidies if there is reference to increased production and/or increased consumption and/or lower price** **Two points of evaluation, can gain all 5 evaluation marks** **Reward 1 mark for each relevant factor identified and then 1 mark for basic elaboration of these and a 3rd if the point is clearly elaborated/developed** **For example, simple reference to the role played by PED gains a mark. Simple reference to XED gains a mark too.** **One point of evaluation which is well developed can therefore gain 3 marks**

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Question	Expected Answer	Marks	Rationale
	• Production subsidies may not be passed on to consumers with firms simply increasing their profit margins • What specifically is the subsidy used / spent on? If it is spent on older rolling stock then this may not increase usage at all. More buses may not necessarily mean greater usage. • It also depends upon which services are being subsidised • Production subsidies may encourage firms to be complacent and inefficient, thus potentially removing the benefit of lower costs. • Non price factors may also be important (eg quality / reliability / convenience issues). These mean that fare subsidies may have less impact which may make people see buses as a poor substitute for cars and therefore not result in any reduction in car use • Award explicit reference to the fact that subsidies will be more effective if used as part of an integrated policy • If incomes are rising then subsidies will have less effect on demand		

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Section B

Question	Expected Answer	Marks	Rationale
2 (a)	**Analyse how and why economists forecast future growth of transport demand**	**[15]**	
	Answers should give a balanced approach explaining both how demand is forecasted and also why this is so crucial in transport economics. How? The Department for Transport will look at numerous statistics in deciding upon future transport trends. These include: • Past information and historical data • GDP (and income elasticity of demand also) • fuel prices • Price Elasticity of Demand (accept as relevant for modal switch) • population growth • the number of different households within the UK • the level of car ownership • the number of goods imported in to the country • the level of industrial output From this data, the DfT will calculate a high and a low forecast and from this will work out what the average forecast is. Why? • Forecasts are used to determine the future network requirements (the so called 'predict and provide' approach) which whilst rejected by some still fulfils a role in transport policy in that it estimates where the greatest congestion bottlenecks will be in the future. • Forecasting plays an important role within CBA enabling decision makers to estimate the importance of particular projects by looking at how bad future congestion will be and therefore what the benefits of a particular project will be. In this way, forecasting is vital if the govt is to accurately see the impact of different policies. • Forecasting also helps the government to see how effective transport policies will be in the future – helping them to see which policies should be introduced today		**Answers which analyse both how AND why will gain 13-15 marks** **Where answers only analyse one aspect (ie how OR why) then 9-12 marks will be rewarded (ie lower L3)** **Therefore even where only one factor is analysed, a Level 3 response is gained**

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Question	Expected Answer	Marks	Rationale
	Level 3 [9-15 marks] For an analysis of the how the government use transport forecasts and/or why these are used. For 13+ marks there must be CLEAR analysis of BOTH HOW AND WHY. 11-12 for basic analysis of both how and why OR good analysis of one of these (how OR why) 9-10 marks where there is only basic analysis of one side HOW? Rather than simply listing which factors are used, to get in to Level 3, answers will need to explain why each factor is used in forecasting. For example, the DfT will use GDP data as higher economic growth will result in increased demand for car use and more cars on the road. They will look at population data as population growth will increase the number of car drivers in the country etc. A simple list of factors which the government uses will be treated as application of knowledge (L2) unless they are developed in terms of how they will be used WHY? A simple answer which states that the government needs such data to decide where roads should be built OR to decide upon future transport policy will gain Level 2. For Level 3, candidates will be expected to analyse the role which the information plays eg by forecasting demand the government will be able to identify where bottlenecks are and therefore where road priorities are. This ensures that scarce resources are allocated in the best possible way Answers may also analyse the role of forecasting within CBA – here forecasting techniques help to identify where the demand will be greatest and therefore where the benefit will be greatest		**HOW? The distinction between analysis and application is that an answer which simply lists which factors are used gains L2 whilst an answer which goes on to explain WHY each factor is important gains L3** **eg "the govt. use GDP data to make forecasts" = L2** **BUT "the govt use GDP data as a rise in income will lead to increased demand" = basic L3** **WHY? The distinction between L2 and L3 is the level of explanation given.** **eg "the government can use this data to see where roads should be built" = L2** **"the government. use this data to see where roads should be built by identify-ing where demand is highest OR seeing where the need is greatest OR where bottlenecks will be worst" = basic L3** **In other words, L2 identifies the use and L3 gives an explanation of how forecasting can be used in this**

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Question	Expected Answer	Marks	Rationale
	Level 2 [5-8 marks] For an application of knowledge and understanding of how and/or why the government use traffic forecasting. This may well take the form of some examples of why the government needs to forecast levels of traffic growth, for example to decide whether or not new roads need building, but there is no clear analysis in terms of the exact role which traffic data play in this decision. For 7+ marks BOTH THE HOW AND WHY aspects need to be addressed. An answer which only addresses the how OR why aspect of the question will be rewarded 5-7 marks. **Level 1 [1-4 marks]** For a basic knowledge and understanding of forecasting and the relevance of this but lacking relevant application or analysis. For example, a basic definition		**A relevant level 2 response would be to explain how the government will take high and low forecasts and use the central one. This shows some knowledge and understanding of HOW** **Basic knowledge only as to what forecasting is**

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Question	Expected Answer	Marks	Rationale
(b)	**Discuss the effectiveness of different methods used by economists to attach monetary values to the external costs and benefits arising from the use of transport services**	[20]	
	Candidates will be expected to explain the different methods used by economists in order to place monetary values on costs such as loss of loss life, accidents, environmental impacts (including pollution, blight and traffic noise), loss of output resulting from congestion and time lost. Several methods can be used to gain accurate monetary values: 1. Compensation criteria (ie how much would it cost to remove the noise pollution by fitting triple glazing) or the cost to repair damage done as a result of an accident. 2. Attaching monetary values to life is extremely difficult and usually involves an attempt to measure the loss of output which the person would have produced if they had lived and their lost income/earnings. Accident costs also include a monetary valuation of the police time used at the scene of the accident and a value for the cost imposed upon the NHS. 3. Congestion costs can be calculated by estimating how many working hours a year are lost due to road congestion and then multiplying this by the average hourly wage. 4. Relevant external benefits include the difficulty of measuring local multiplier effects and the difficulties of measuring the environmental benefits of greater bus/train use. Attempts to measure these may well include increases in regional economic growth (although clearly proving causation of factors will be a significant issue). 5.Simple price comparisons (eg house prices before and after an airport is built) can be used to see the decline in value as an external cost ***As an alternative approach, accept analysis and criticism of CBA and other methods of attaching net cost / benefit figures.*** ***NOTE: CBA approach gains a maximum of 15 marks***		**Answers which refer to congestion charging will receive a maximum of 7 marks:** **For charging approach, to gain L3 (6-7) answer needs to <u>analyse</u> impact of charge in shifting the supply curve to the left** **Answers which use the Cost-Benefit Analysis approach will gain a maximum of 15 marks on part (b)**

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Question	Expected Answer	Marks	Rationale
	Relevant discussion may focus upon a number of factors including: • The subjective nature of such valuations. For example, the value attached to the loss of a scenic view due to the building of a motorway may be extremely high for one person but very low for another. Likewise, the benefit gained from greater public transport use is incredibly difficult to measure as it will involve attempts to measure environmental gain • Difficulties attaching values to uncertainties eg if a person died we couldn't be sure how much they would earn for the rest of their lives • Proving causation – just because a business loses custom at the same time as there is a rise in congestion does not mean that the two factors are correlated. Likewise, if the local economy grows more rapidly following an expansion of public transport in the locality, there is no definite proof that one has caused the other. • Relevant problems of using CBA such as the subjective nature of the process, what costs / benefits to include, what discount rate to use. Evaluation of CBA must include reference to WHY it is difficult to attach monetary values here. Therefore the simple comment that there are flaws to CBA as it is difficult to attach monetary values is insufficient until this is developed (eg in terms of subjectivity, changes in monetary values over time etc). Accept criticism of CBA in terms of political bias and other limitations of the process.		

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Question	Expected Answer	Marks	Rationale
	Level 4 (a) [16-20] For a discussion which includes a judgement as to how effective such measures are for estimating external costs and benefits. Such an answer will develop clear explanations of the difficulties of measurement and then conclude whether or not such methods are indeed effective. **Level 4 (b) [11-15]** For a basic discussion of some of the difficulties involved in trying to estimate external costs OR benefits which may only develop one or two relevant problems of measurement without actually forming a relevant judgement as to whether these are significant problems or not. A clear, two sided discussion will be given 13-15 marks, otherwise 11-12 marks for a basic discussion where there is only a hint of evaluation Complex ideas have been expressed clearly and fluently using a style of writing which is appropriate to the complex subject matter. Sentences and paragraphs, consistently relevant, have been well structured, using appropriate technical terminology. There may be few, if any, errors of spelling, punctuation and grammar. **Level 3 [5-10]** For an analysis of how estimates for such external costs and benefits may be derived. Candidates analyse how monetary estimates may be attained without offering any relevant criticism/evaluation of such methods. Accept analysis of CBA. For a one sided answer which simply analyses the different stages within CBA OR states how the decision is taken (ie SB>SC) then a maximum of 7 marks will be awarded. If both of these are referred to but no criticisms are introduced then 8-10 marks will be given Relatively straightforward ideas have been expressed with some clarity and fluency. Arguments are generally relevant, though may stray from the point of the question. There will be some errors of spelling, punctuation and grammar, but these are unlikely to be intrusive or obscure meaning.		**Level 4 (b) – for this level, there must be a two sided discussion of methods of attaching monetary values** **Award 13-15 marks where there is clear, balanced discussion of both sides (ie explaining clearly how such methods work and then their limitations)** **Award 11-12 marks where there is only basic discussion. For example, following clear analysis of how such measurements can be made there is then basic criticism (or vice-versa)** **Where only one method of measuring costs or benefits is analysed then 7 marks maximum. If two or methods analysed then 8-10 marks** **For CBA approach: simple analysis of stages of CBA with no further analysis gains a maximum of 7 marks** **Likewise, CBA which just lists costs / benefits used is 7 maximum**

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Question	Expected Answer	Marks	Rationale
	Level 2 [3-4] For an application of knowledge and understanding of how estimates could be obtained. Answers in this level will identify the different measurement methods which could be used to gain monetary values for specific external costs or benefits but fail to explain how these could be used. If measures to value both costs and benefits are considered then 4 marks will be rewarded Some simple ideas have been expressed in an appropriate context. There are likely to be some errors of spelling, punctuation and grammar of which some may be noticeable and intrusive. **Level 1 [1-2]** For knowledge and understanding of how monetary estimates can be gained, for example using the value of lost output but failing to develop this in terms of which cost it estimates. Alternatively, answers which simply state examples of external costs and benefits here will gain up to 2 marks OR simple definitions of what external costs / benefits are Some simple ideas have been expressed. There will be some errors of spelling, punctuation and grammar which will be noticeable and intrusive. Writing may also lack legibility.		**Examples of external costs and benefits in the real world can receive 4 marks** **Definitions of external costs/benefits only receive 2 marks**

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3 (a)	**Analyse the economic arguments for rail privatisation**	**[15]**	
	Candidates should analyse clear arguments for the privatisation of rail: Whilst some latitude can be allowed in discussing the privatisation of rail services in other countries (and therefore need not be specific to British Rail), candidates should discuss the reasons why privatisation of rail services may be beneficial. Such arguments may include: • The need to attract greater private sector investment to generate new capital investment • A reduction in government spending (and borrowing?) • The introduction of greater competition with firms bidding against each other to win the right to operate a franchise. The benefits of increased competition should be developed including increased productive efficiency, innovation, dynamic efficiency gains and a reduction in 'X' inefficiency as well as the benefits of price and non price competition for consumers. Hence there should also be a better quality service provided to the public • Benefits of increased contestability and the threat of competition • The theory that private sector management may be more motivated to provide a better quality service. **Level 3 [9-15]** For an explanation of the reasons why the government privatised British Rail to include clear, detailed analysis of each factor. For 13+ marks, the benefits of increased competition must be developed fully, using clear economic analysis. Accept relevant diagrams which are used to analyse the benefits of increased competition (including theory of the firm)		

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Question	Expected Answer	Marks	Rationale
	Level 2 [5-8] For an application of knowledge and understanding of the reasons why British Rail was privatised. Candidates in this level will correctly identify reasons why the government privatised British Rail but fail to develop them in any detail. For 7+ marks more than one factor will be developed. **Level 1 [1-4]** For knowledge and understanding of what privatisation is, but lacking any clear knowledge of the reasons behind rail privatisation. For 3+ marks, clear detail of how British Rail was privatised is needed.		

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Question	Expected Answer	Marks	Rationale
(b)	**Discuss the extent to which a monopoly provider of transport will always increase economic efficiency**	**[20]**	
	Answers should develop the theory of natural monopoly. Due to the nature of infrastructure provision in transport with extremely high fixed costs, there is the scope for massive economies of scale and therefore the Minimum Efficient Scale for infrastructure provision in transport is extremely high. Therefore, in order to maximise the benefits of economies of scale, there should be one provider producing at a very large level of output. Hence in this context, a monopolist provider of transport infrastructure will be able to produce at lower average costs and hence will be able to maximise productive efficiency. In addition, monopoly may result in greater economic efficiency if abnormal profits provide the incentive to innovate and therefore raise allocative efficiency. Abnormal profits, when made, may be used to increase investment levels and innovation ie dynamic efficiency gains Possible discussion includes: • Traditional monopoly theory states that there will be productive and allocative inefficiency in this market • If the monopoly is too large then it may start to suffer from diseconomies of scale with output levels being too high and hence the firm will suffer from higher average costs ie inefficiency • In addition, monopolists may suffer from 'X' inefficiency (organisational slack with higher costs than in a competitive market) and also lose potential dynamic efficiency gains (innovation, R & D) • The threat of contestability – if the govt threatens monopoly with greater competition / removing legal barriers then this may force it to be more efficient (eg contestability arising from deregulation)		

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Question	Expected Answer	Marks	Rationale
	Level 4 (a) [16-20] For a discussion as to whether or not a monopoly will raise economic efficiency. Include clear judgement which attempts to weight the evidence **Level 4 (b) [11-15]** Discussion of whether or not monopoly provision raises efficiency. An answer which analyses one side very clearly (eg it is efficient) and then hints in a very basic manner at the other side (eg not efficient) gains 11-12 An answer which develops both sides in some depth but fails to introduce a judgement gains 13-15 marks Complex ideas have been expressed clearly and fluently using a style of writing which is appropriate to the complex subject matter. Sentences and paragraphs, consistently relevant, have been well structured, using appropriate technical terminology. There may be few, if any, errors of spelling, punctuation and grammar. **Level 3 [5-10]** Analysis of why monopoly providers of transport will raise economic efficiency – a purely one sided answer Answers which fail to analyse specific types of economic efficiency will gain 7 marks maximum Relatively straightforward ideas have been expressed with some clarity and fluency. Arguments are generally relevant, though may stray from the point of the question. There will be some errors of spelling, punctuation and grammar, but these are unlikely to be intrusive or obscure meaning.		**Level 4 (b) – for this level, there must be a two sided discussion of whether monopoly raises economic efficiency.** **Award 13-15 marks where there is clear, balanced discussion of both sides** **Award 11-12 marks where there is only basic discussion. For example, following clear analysis of one side there is only a simple evaluative statement made giving the opposite viewpoint** **Level 3: An answer which only considers why a monopolist <u>will</u> increase economic efficiency can gain up to 10 marks maximum for analysis.**

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Question	Expected Answer	Marks	Rationale
	Level 2 [3-4] For the application of knowledge and understanding of why monopoly may increase economic efficiency. Answers in this level may simply identify types of efficiency or identify some of the characteristics of a monopoly Some simple ideas have been expressed in an appropriate context. There are likely to be some errors of spelling, punctuation and grammar of which some may be noticeable and intrusive. **Level 1 [1-2]** For knowledge and understanding of monopoly and/or economic efficiency only eg general definitions of monopoly or efficiency Some simple ideas have been expressed. There will be some errors of spelling, punctuation and grammar which will be noticeable and intrusive. Writing may also lack legibility.		**Level 2 answers may simply identify the costs or benefits of monopoly without making any reference to efficiency**

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Question	Expected Answer	Marks	Rationale
4 (a)	**Analyse, using examples, what is meant by a more 'sustainable' transport policy**	**[15]**	
	The Bruntland Commission's definition of sustainability (1987) is development "which meets the needs of the present without compromising the ability of future generations to meet their own needs". In practice, when applied to transport, this would involve a 'carrot and stick' approach being taken – using economic policies to provide incentives to use low emission forms of transport whilst also penalising those who continue to use high polluting modes of transport. Overall, these policies should be used together and an integrated approach adopted. Candidates are expected to develop examples of such policies, for example higher taxes on high polluting cars through a graduated system of V.E.D., the possibility of road pricing whereby road users are charged more during rush hour and in congested areas and also the use of subsidies to encourage greater use of public transport. Explanation of integration in terms of policies to ensure a seem less transfer between different modes of transport through greater investment in infrastructure and the operation of 'through ticketing' is also relevant. **Level 3 [9-15]** For a clear explanation of exactly what is meant by a 'sustainable' transport policy with use made of relevant examples. For 13+ candidates will be expected to <u>clearly</u> analyse at least two possible policies. 11-12 marks – basic analysis of two policies OR thorough analysis of one 9-10 marks – basic analysis of one policy (in terms of behaviour changing or some idea of the policy resulting in modal change) Only answers which clearly analyse how such policies actually work will be in this level		**L3 must explain why each policy is sustainable ie why does car demand fall or public transport use rise? This reference to change is what is needed for analysis ie any explanation of how the policy works** **As soon as 2 policies are analysed 13+**

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Question		Marks	
	Level 2 [5-8] For an application of knowledge and understanding of what a 'sustainable' transport policy means. Answers in this level will include relevant examples of possible policies which could be used but will fail to develop these. For 7+ marks, answers must refer to at least two policies. **NOTE:** Where there is no reference to specific policies but to only general principles eg "the government will aim to move people from cars to public transport" then this is Level 2 but can receive a maximum of 8 marks only **Level 1 [1-4]** For knowledge and understanding of what 'sustainability' is but lacking any clear/relevant application.		**NOTE: Award a maximum of 8 marks if no specific policies are given but there is a simple understanding of needing to move people from cars to forms of public transport**

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Question	Expected Answer	Marks	Rationale
(b)	**Discuss whether recent government transport policies could be deemed to be more 'sustainable'**	**[20]**	
	There is huge scope here for candidates to evaluate recent government transport policy. A broad definition of 'recent' should be applied to include discussing of the government's 'Ten Year Plan' (2000), the White Paper launched in 2004 ('The future of Transport'), moves to promote integration but also much earlier policies such as bus deregulation and privatisation. Policies which promote the concept of sustainability include a graduated scale for V.E.D., the incentives introduced for local authorities to introduce local road-user charging schemes, the attempts made to integrate different modes of transport, the commitment of significant government resources to long term capital projects / public transport infrastructure, the continued use of subsidies in the transport sector and recent scrappage schemes which have the effect of introducing more low polluting vehicles. Nevertheless, criticisms of government policies remain. With a greater role for the private sector, it is arguably harder to achieve a national, co-ordinated and most importantly integrated solution to congestion issues. This is because the transport sector is much more decentralised with private sector firms arguably more interested in maximising profit rather than achieving an integrated network. Criticisms of privatisation and deregulation in terms of loss of cross-subsidy and vertical disintegration are relevant. Furthermore, several government policies have been deemed to be unpalatable and have been quietly sidelined (eg a national road pricing scheme). The abolition of the fuel tax escalator in 2000 could also be discussed. Accept relevant criticisms of individual policies too eg limitations of road user-charging and subsidies are valid here **Level 4 (a) [16-20]** For discussion of whether or not recent government transport policy is sustainable. There is also a clear judgement which attempts to weigh the arguments.		**Accept non UK policies as well**

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Question	Expected Answer	Marks	Rationale
	Level 4 (b) [11-15] For a discussion of whether or not government policy is sustainable. Complex ideas have been expressed clearly and fluently using a style of writing which is appropriate to the complex subject matter. Sentences and paragraphs, consistently relevant, have been well structured, using appropriate technical terminology. There may be few, if any, errors of spelling, punctuation and grammar. **Level 3 [5-10]** For analysis of recent govt transport policy in terms of sustainability but lacking any clear discussion as to whether or not this is the case. If only one policy is analysed then a maximum of 7 marks will be given. Relatively straightforward ideas have been expressed with some clarity and fluency. Arguments are generally relevant, though may stray from the point of the question. There will be some errors of spelling, punctuation and grammar, but these are unlikely to be intrusive or obscure meaning. **Level 2 [3-4]** For the application of knowledge and understanding of recent government policy. Answers in this level will explain recent transport policies but will fail to analyse whether or not they are sustainable. Some simple ideas have been expressed in an appropriate context. There are likely to be some errors of spelling, punctuation and grammar of which some may be noticeable and intrusive. **Level 1 [1-2]** For knowledge and understanding of what sustainability is or an answer giving basic examples of recent govt policies but failing to develop these. Some simple ideas have been expressed. There will be some errors of spelling, punctuation and grammar which will be noticeable and intrusive. Writing may also lack legibility.		**Award 11-12 marks where only basic criticism / discussion is introduced based upon analysis of how policies will work. In other words a mainly one sided answer but with basic discussion** **Award 13-15 mark where there is clear discussion (ie a balanced two-sided answer)** **L3 requires simple analysis of why each policy would be sustainable eg why it reduces car use or increases the use of public transport** **If only one policy is analysed then 7 maximum** **Level 2: accept general reference to policies aiming to move people out of cars and onto public transport**
	Section B Total: [35 marks]		
	Paper Total: [60 marks]		

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