Please check the examination details below before entering your candidate information

Candidate surname: StemUp Model Solution

Other names:

Pearson Edexcel Level 3 GCE

Centre Number:

Candidate Number:

Time 2 hours

Paper reference **9EC0/01**

Economics A

Advanced

PAPER 1: Markets and Business Behaviour

You do not need any other materials.

Total Marks

Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- There are three sections in this question paper. Answer **all** questions from Section A and Section B. Answer **one** question from Section C.
- Answer the questions in the spaces provided
  – *there may be more space than you need.*

Information

- The total mark for this paper is 100.
- The marks for **each** question are shown in brackets
  – *use this as a guide as to how much time to spend on each question.*
- Calculators may be used.

Advice

- Read each question carefully before you start to answer it.
- Check your answers if you have time at the end.
- Good luck with your examination.

Turn over ▶

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SECTION A

Answer ALL questions. Write your answers in the spaces provided.

Some questions must be answered with a cross in a box ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.

You are advised to spend 30 minutes on this section.

Use the data to support your answers where relevant. You may annotate and include diagrams in your answers.

1 Statement 1: Since Poland joined the European Union (EU) in 2004, over one million of its workforce have migrated to other countries in the EU.

Statement 2: Many engineers have left Poland for higher paid jobs in other countries in the EU.

(Source: https://www.forbes.com/sites/freylindsay/2019/08/09/polands-emigration-rate-is-falling-but-people-are-still-worried-about-the-brain-drain-bogeyman/#9550525792e6)

(a) Which **one** of the following best describes the two statements above?

(1)

		Statement 1	Statement 2
☒	**A**	Normative	Normative
☒	**B**	Normative	Positive
☒	**C**	Positive	Normative
☒	**D**	Positive	Positive

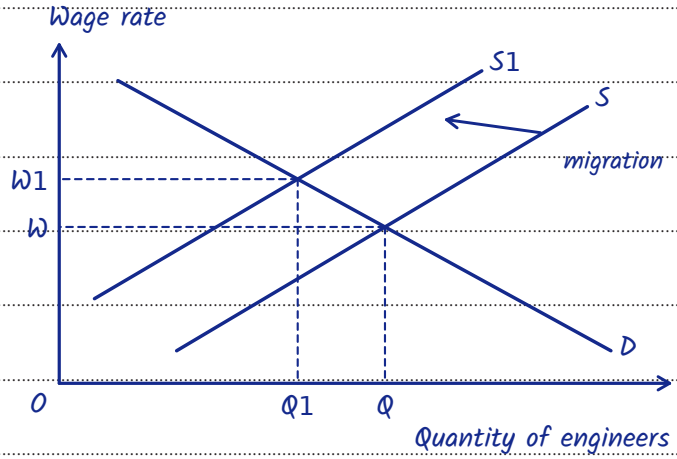
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(b) Explain the likely impact of migration on the wage level of engineers in Poland.

(4)

Migration of over one million Polish workers, including many engineers leaving for higher paid jobs in other EU countries, reduces the supply of engineers in Poland, so the supply curve of labour shifts left from S to S1.

At the original wage W there is now excess demand for engineers (a shortage). As it takes years to train new engineers, firms compete for the remaining workers by offering higher wages, causing a contraction in demand for labour, until a new labour market equilibrium is reached at a higher wage W1 and lower employment Q1.



(Total for Question 1 = 5 marks)

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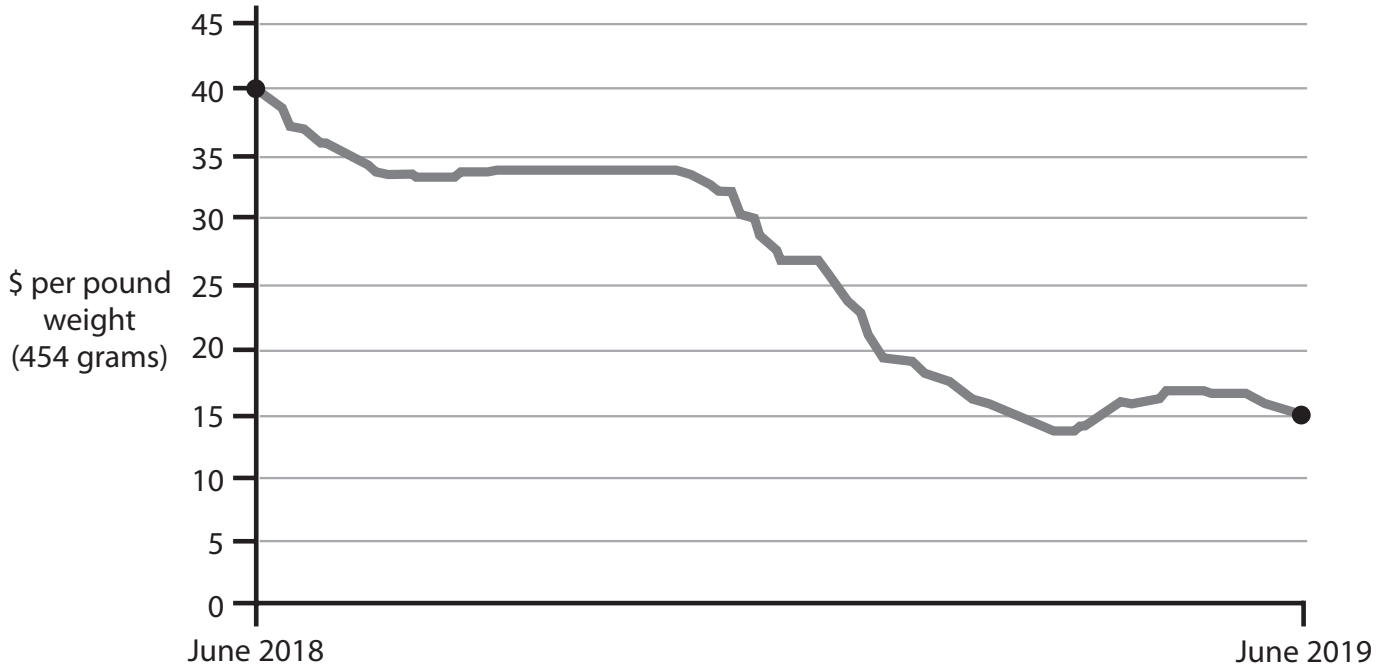
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2 Cobalt is a key metal used in the batteries of electric cars. China is the world's largest producer of electric cars but has recently cut subsidies to its manufacturers.

The Democratic Republic of the Congo (DRC) produces more than 60% of the world's supply of cobalt, from its small-scale mines. Many new small mines opened in 2018 as a result of improved expectations of profit.

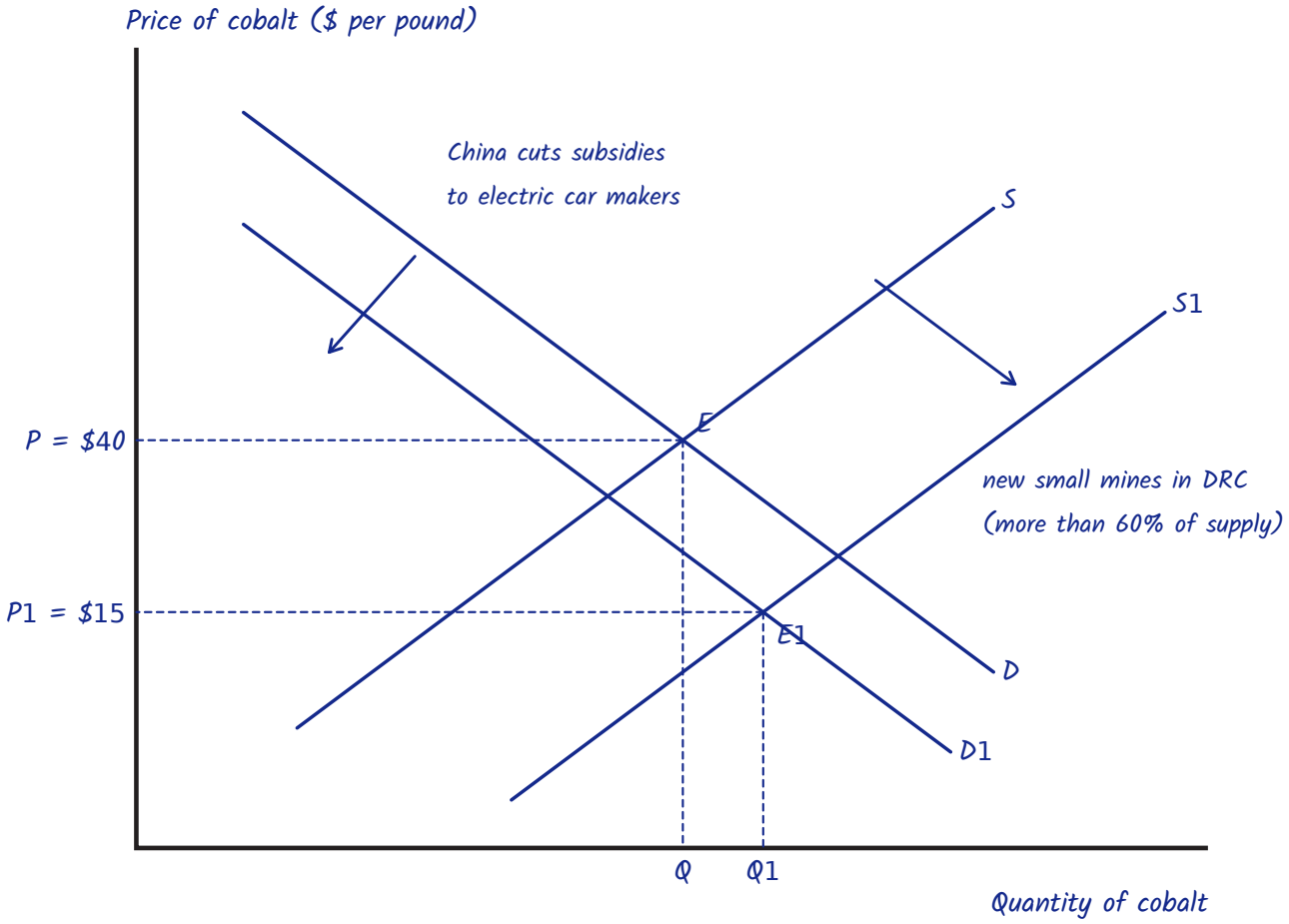
The following graph shows the price of cobalt between June 2018 and June 2019.



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(a) With reference to the information provided, draw a supply and demand diagram to show why the price of cobalt fell between June 2018 and June 2019.

(4)



(b) Between June 2018 and June 2019 the price of cobalt fell by:

(1)

- ☐ **A** 25%
- ☐ **B** 37.5%
- ☒ **C** 62.5%
- ☐ **D** 166.7%

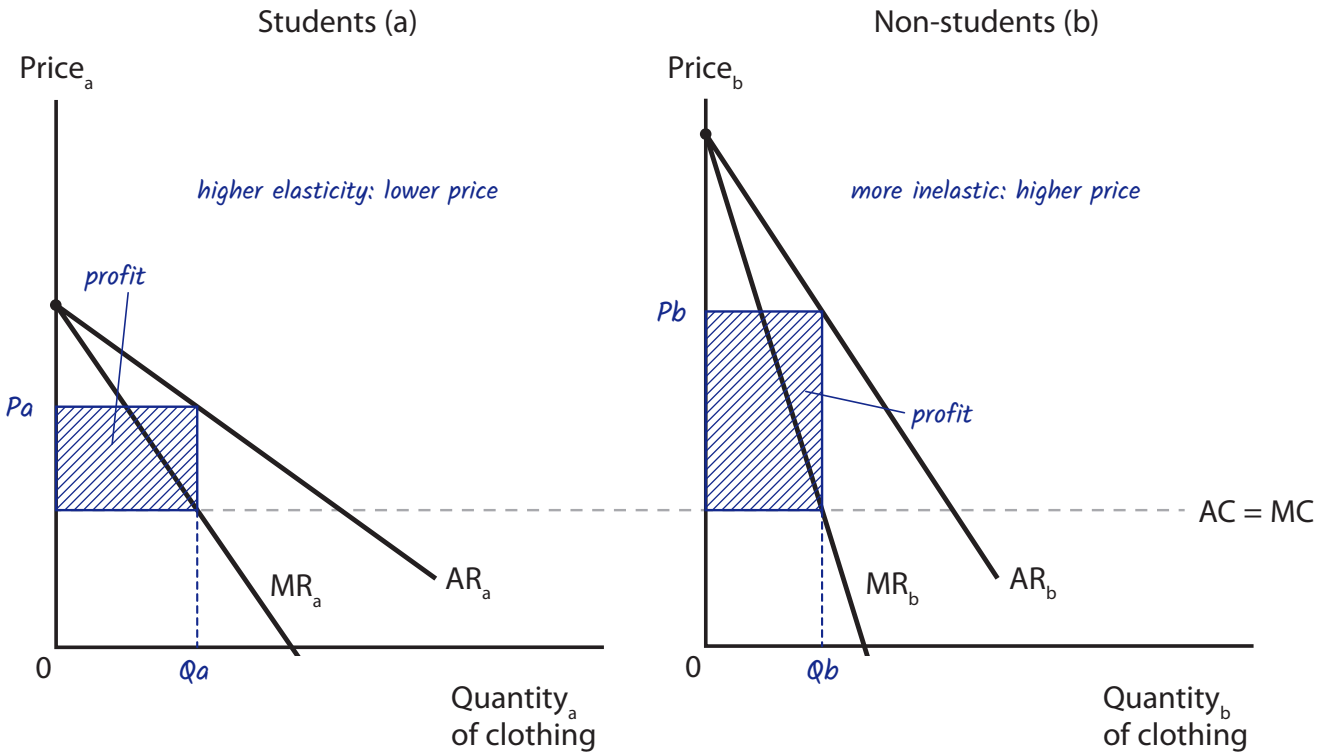
(Total for Question 2 = 5 marks)

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3 River Island is a clothing retailer. Students are offered a River Island student discount code to benefit from a 10% price reduction as an attempt by the firm to increase profit.

(a) Complete the third-degree price discrimination diagram below. Draw the impact on each sub-market by showing the price and profit.

(4)



MR = MC in each sub-market, so Pb > Pa

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(b) Which **one** of the following is necessary for a firm to be able to practise price discrimination?

(1)

- ☒ **A** It has some degree of market power
- ☐ **B** It is able to store its product
- ☐ **C** Its product has different features in different markets
- ☐ **D** The costs of supplying some customers are higher

(Total for Question 3 = 5 marks)

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4 Patrick Street Productions produces musicals. Its latest production is 'It's a Wonderful Life' and the total cost of this production is $200 000. The ticket price is $40. The theatre has a capacity of 300 seats. The company aims for revenue maximisation. If this is achieved, revenue from ticket sales will cover 30% of total costs. Charitable donations contribute 12.5% towards total cost and a government subsidy ensures the production covers all of its costs.

(Source adapted from: https://www.cbc.ca/news/canada/british-columbia/a-bit-of-a-desperate-time-as-costs-rise-professional-theatre-companies-survive-rather-than-thrive-1.5489733)

(a) Calculate the total revenue from ticket sales for 'It's a Wonderful Life', assuming it is shown only five times, all at full capacity. You are advised to show your working.

(2)

Revenue per show = $40 × 300 seats = $12 000

Total revenue = $12 000 × 5 shows

= $60 000

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(b) Calculate the value of the government subsidy necessary for this production to cover all of its costs.

(2)

Subsidy share = 100% − 30% (ticket sales) − 12.5% (charitable donations) = 57.5%

Subsidy = 0.575 × $200 000

= $115 000

(c) Which **one** of the following conditions is necessary for revenue maximisation to occur?

(1)

- ☒ **A** Average revenue equals average cost
- ☒ **B** Average revenue equals marginal cost
- ☒ **C** Marginal revenue equals average revenue
- ☒ **D** Marginal revenue equals zero

(Total for Question 4 = 5 marks)

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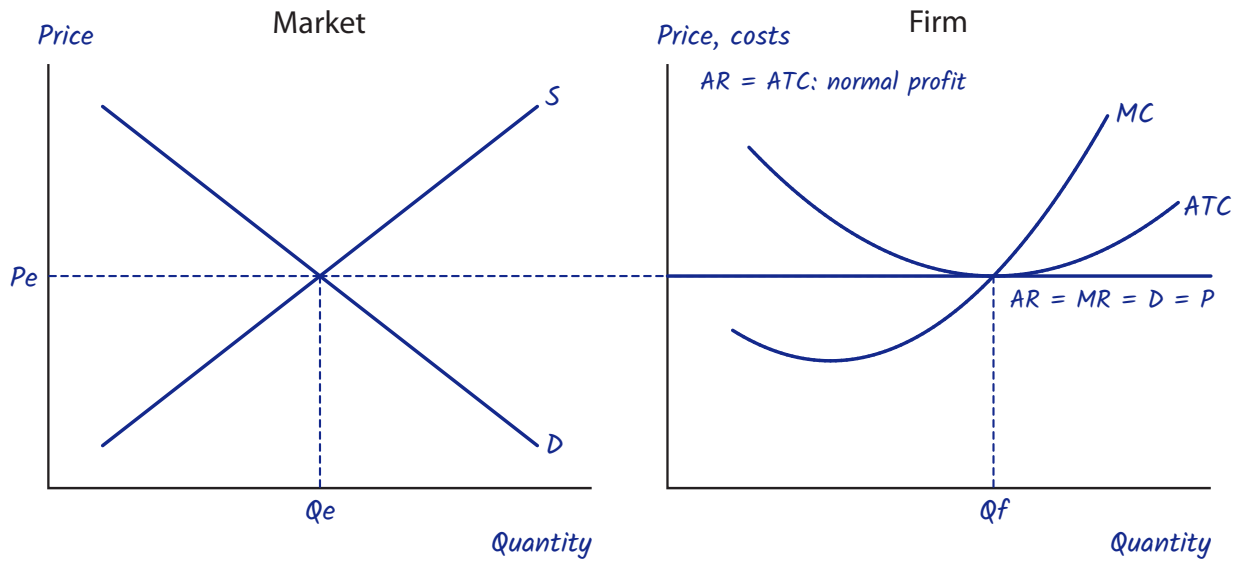
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5 In Sicily, many households can grow lemons of the same quality as each other. Chiara decides to sell lemons at her local market, expecting to make a normal profit. She notices that all of the many lemon sellers are charging exactly the same price.

(a) Draw diagrams showing the equilibrium positions for both the lemon market and a typical firm in the long run.

(4)



(b) Which **one** of the following will exist in the **short run** if Chiara makes a loss?

(1)

- ☒ **A** Allocative efficiency and productive efficiency
- ☒ **B** Allocative efficiency and productive inefficiency
- ☒ **C** Allocative inefficiency and productive efficiency
- ☒ **D** Allocative inefficiency and productive inefficiency

(Total for Question 5 = 5 marks)

TOTAL FOR SECTION A = 25 MARKS

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SECTION B BEGINS ON THE NEXT PAGE.

SECTION B

Read Figures 1 and 2 and the following extracts (A to C) before answering Question 6.

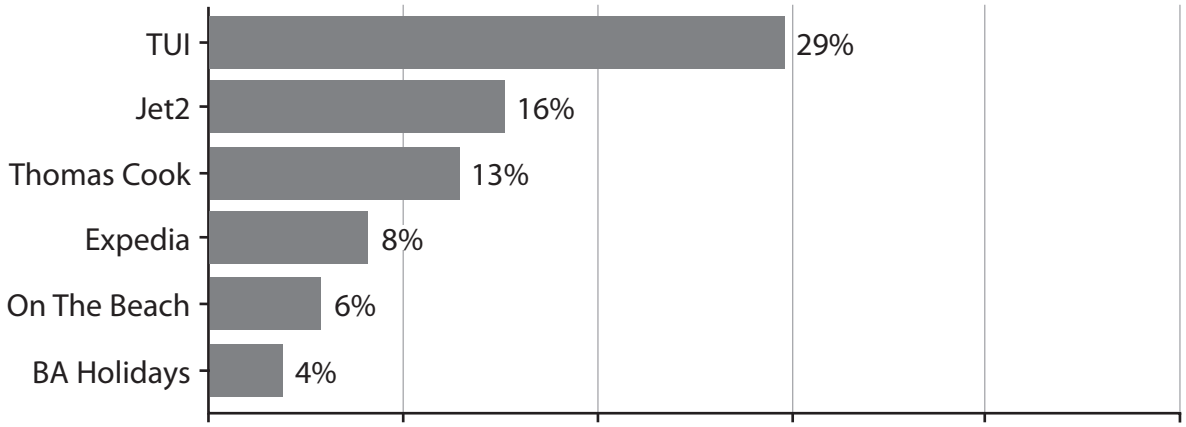
Write your answers in the spaces provided.

You are advised to spend 1 hour on this section.

Question 6

The travel and tourism industry

Figure 1: Package holiday market share of the six largest providers, booked by UK residents, 2019



(Source adapted from: https://knowledge.sharescope.co.uk/2019/10/16/finding-companies-that-control-their-own-destinies/The Times/ATOL)

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Figure 2: Jet2 package holiday prices to Sorrento

Price before Thomas Cook shutdown

2 Adults for 7 Nights from Monday 25 May 2020

- Half Board
- 1 x Premium Double or Twin room
- Return flights from Edinburgh
  View flight times
- 22 kg Bag Allowance
- 10 kg Hand Baggage
- ATOL Protected
- Coach Transfers

Holiday price from **£1,576** Per person price **£788**

Price 12 hours after Thomas Cook shutdown

2 Adults for 7 Nights from Monday 25 May 2020

- Half Board
- 1 x Premium Double or Twin room
- Return flights from Edinburgh
  View flight times
- 22 kg Bag Allowance
- 10 kg Hand Baggage
- ATOL Protected
- Coach Transfers

Holiday price from **£1,648** Per person price **£824**

Data accessed: 22nd and 23rd September 2019

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Extract A

Marginal productivity of cabin crew

Cabin crew are responsible for loading passengers and providing in-flight meals. United Airlines is planning to reduce the number of its cabin crew members onboard international flights. The airline currently operates its planes with one more cabin crew member than its competitors. The marginal productivity of this additional crew member may be low. By reducing the number of its cabin crew members United Airlines will be able to operate more efficiently and compete more effectively.

(Source adapted from: https://simpleflying.com/united-airlines-to-reduce-number-of-crew-on-international-flights/)

Extract B

Thomas Cook's environmental impact

Thomas Cook Group plc's operations included its airline and 560 high street travel agents providing flights, hotels and package holidays.

The environmental impact of the travel industry is significant. It accounts for 8% of all global carbon emissions. Thomas Cook recognised the risks presented by climate change and actively engaged in reducing their airline emissions. Its plans included using more efficient aircraft and using lower-carbon fuel. In 2018, Thomas Cook was included in the top 10 of the world's most fuel-efficient airlines.

(Source adapted from: https://www.thomascookgroup.com/investors/insight_external_assest/Thomas+Cook+Sustainability+Report+2018.pdf)

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Extract C

Why did Thomas Cook shut down?

Thomas Cook Group plc ceased trading on 23 September 2019. The collapse of Thomas Cook left 600 000 travellers stranded overseas and approximately 21 000 worldwide employees were left without a job.

Thomas Cook's management said that the failure of rescue talks between banks, shareholders and the UK Government meant it had no choice but to shut down the business.

But in truth the tour operator's problems go back much further. A disastrous merger in 2007, increased debts, the internet revolution in holiday booking and Brexit uncertainty all contributed to the failure of the business.

In 2007 it merged with MyTravel. Thomas Cook directors had an objective of rapid company growth over short-term profitability. The merger was supposed to create a European giant, promising £75 million-a-year cost savings and a springboard to challenge emerging internet rivals. In reality, Thomas Cook was merging with a company that had only made a profit once in the previous six years, and the deal left the Group with huge debts. In May 2019, the firm reported a £1.5 billion loss.

The role of the management in Thomas Cook's collapse is being investigated by the UK Government. Thomas Cook executives' salaries and bonuses have been questioned. Directors received salaries totalling £20 million in the five years before its collapse. The Chief Executive Officer (CEO) earned a £500 000 cash bonus in 2017 and about £8.5 million in his five years with the company. It seems that around £4 million of this was in the form of shares. The share price reached £1.46 in 2018, but each share is now worthless.

The CEO said that the directors had worked "exhaustively" to rescue Thomas Cook and create a long-term turnaround strategy. "It is a matter of profound regret to me and the rest of the board that we were not successful."

The UK prime minister admitted that the government refused to grant £150 million as a subsidy to help rescue Thomas Cook in the short run. The UK prime minister stated: "Clearly, that is a lot of taxpayers' money and sets up, as people will appreciate, a moral hazard in the case of future such commercial difficulties that companies face. I have questions about whether it's right that the directors, or whoever, the board, should pay themselves large sums when businesses can go down the tubes like that. One is driven to reflect on whether the directors of these companies are properly incentivised to sort such matters out".

(Source adapted from: https://www.theguardian.com/business/2019/sep/23/thomas-cook-as-the-world-turned-the-sun-ceased-to-shine-on-venerable-tour-operator

and https://www.ft.com/content/a7dd2554-de23-11e9-b112-9624ec9edc59)

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6 (a) Explain the likely impact of diminishing marginal productivity of labour on cabin crew staffing levels. Refer to Extract A in your answer.

(5)

(b) Examine the likely impact of Thomas Cook's plan 'to reduce their airline emissions' (Extract B, line 6) on the social optimum position. Use an appropriate externalities diagram in your answer.

(8)

(c) With reference to Extract C, assess whether Thomas Cook's failure was caused by the principal-agent problem.

(10)

(d) With reference to Extract C, discuss the proposed government subsidy to prevent Thomas Cook from reaching its shut-down point.

(12)

(e) With reference to the information provided, discuss the decision by Jet2 to increase its package holiday prices.

(15)

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6 (a) Explain the likely impact of diminishing marginal productivity of labour on cabin crew staffing levels. Refer to Extract A in your answer.

(5)

Diminishing marginal productivity of labour means that in the short run, as more units of a variable factor (labour) are added to fixed factors, the additional output from each extra worker eventually falls. Total product still rises, but at a slower rate, and average product declines.

On a plane the space, seats, trolleys, meals and doors are fixed, so each extra cabin crew member adds less: for example, the first crew member may serve 50 passengers, the second 60 more, a third only 30 more and a fourth just 20, as crew start to get in each other's way. Extract A says the marginal productivity of United's additional crew member 'may be low'.

As each crew member is paid a similar wage, the additional cost of hiring more labour has to be set against a smaller additional output, so the marginal cost of serving passengers rises at a faster rate. When the value of the extra output is below the wage, it is not worth employing that worker. United will therefore reduce staffing levels by one crew member per international flight, matching its competitors. This lowers the cost per passenger, allowing cheaper tickets, so the airline can 'operate more efficiently and compete more effectively'.

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(b) Examine the likely impact of Thomas Cook's plan 'to reduce their airline emissions' (Extract B, line 6) on the social optimum position. Use an appropriate externalities diagram in your answer.

(8)

A negative externality is a cost imposed on third parties who are not part of the transaction, so marginal social cost (MSC) = marginal private cost (MPC) + marginal external cost (MEC). Flights produce CO2 emissions: Extract B shows the travel industry accounts for 8% of all global carbon emissions, contributing to climate change, with flood damage, storms and drought harming households and farmers. The social optimum is where MSC = MSB.

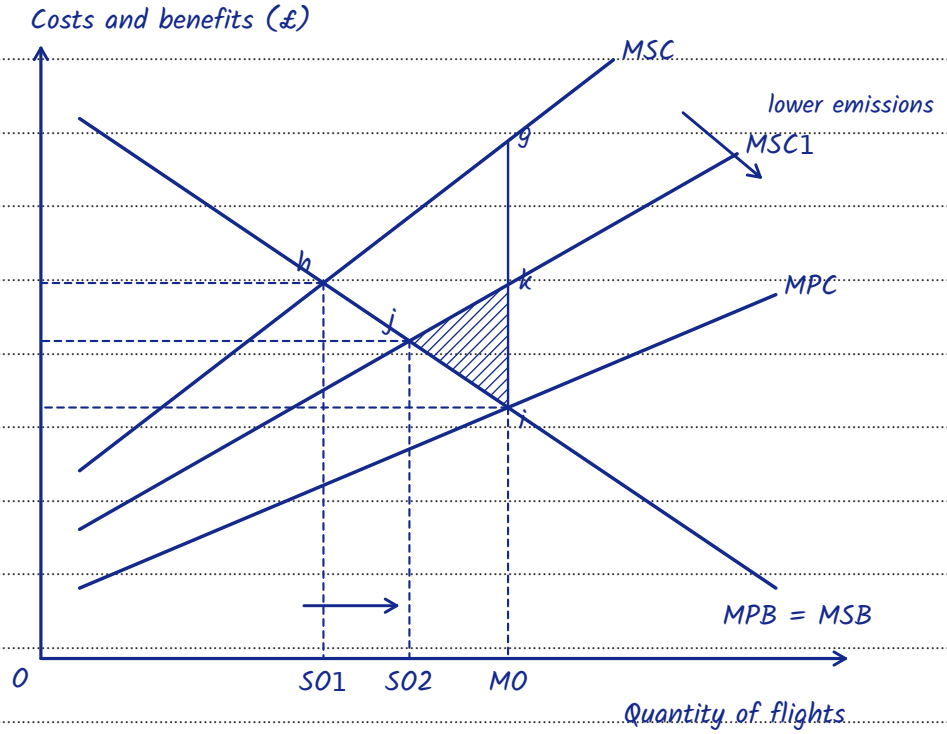
In my diagram, with no external benefits (MPB = MSB), the free market produces at MO, where MPC = MSB, but the original social optimum is SO1, where MSC = MSB at h. The over-provision of flights from SO1 to MO creates the welfare loss ghi.

Thomas Cook's plan to reduce airline emissions, by using more efficient aircraft and lower-carbon fuel, means each flight causes less CO2 per passenger. Third party effects are lower, so the external cost at MO falls from gi to ki and the MSC curve pivots (skews) right to MSC1. The new social optimum, where MSC1 = MSB at j, moves right from SO1 to SO2, so the socially optimal quantity of flights increases and is closer to the market output. The welfare loss falls from ghi to the shaded area kji, so resources are allocated more efficiently. The plan seems effective, as in 2018 Thomas Cook was in the top 10 of the world's most fuel-efficient airlines, and lower emissions could mean lower flood clean-up and insurance bills for third parties.

However, the impact on the social optimum may be limited. It is difficult to measure the size of the negative externality and to put a monetary value on third party effects, and data on CO2 emissions from planes may be faulty, so the true positions of MSC1 and SO2 are uncertain. Also, emissions from Thomas Cook's 560 travel agents, hotels and holiday activities remain high, and as fuel-efficient planes reduce costs, the quantity of flights may increase, so total emissions may not fall much. Thomas Cook is also only one airline, so the

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effect on the market as a whole is small.



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(c) With reference to Extract C, assess whether Thomas Cook's failure was caused by the principal-agent problem.

(10)

The principal-agent problem occurs when the agents who run a firm (directors and managers) pursue their own objectives rather than those of the principals who own it (shareholders), who want profit maximisation. It arises from the divorce of ownership and control and asymmetric information, as managers know more about the business than shareholders.

There is evidence that this caused Thomas Cook's failure. Extract C states that the directors had an objective of 'rapid company growth over short-term profitability'. Managers gain higher salaries, status and power from running a larger firm, so in 2007 they merged with MyTravel, a company that had only made a profit once in the previous six years. The deal left the Group with huge debts, and the promised £75 million-a-year cost savings did not materialise; by May 2019 it reported a £1.5 billion loss. Rapid growth may also have caused diseconomies of scale, raising average costs.

Executive pay also suggests a conflict of interest. Directors received salaries totalling £20 million in the five years before the collapse, and the CEO earned a £500 000 cash bonus in 2017 and about £8.5 million in five years, perhaps linked to sales or market share rather than long-term profitability. This creates moral hazard: managers faced no consequences for high-risk decisions with shareholders' money, so they may have pursued mergers and price wars rather than cutting costs and paying off debts. The Prime Minister questioned whether directors were 'properly incentivised', and the government is investigating management's role.

However, the principal-agent problem may not be the main cause. Around £4 million of the CEO's £8.5 million was paid in shares, which aligns his interests with shareholders, since he gains from a higher share price; those shares are now worthless and he also lost his job, earnings and reputation. The CEO said the directors worked 'exhaustively' on a long-term turnaround strategy. Shareholders could also have held the directors accountable at the AGM

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by rejecting pay and bonus awards, so they share responsibility.

Other factors were also important: the internet revolution in holiday booking reduced demand for its high street travel agents, Brexit uncertainty reduced bookings, and fuel costs and competition from TUI and Jet2 squeezed margins. The failure of rescue talks between banks, shareholders and the government was the final trigger.

Overall, the principal-agent problem was a significant underlying cause, because the growth-driven merger created the debts that made the firm so vulnerable, but it was the combination with structural change in the market and Brexit uncertainty that led to the collapse.

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(d) With reference to Extract C, discuss the proposed government subsidy to prevent Thomas Cook from reaching its shut-down point.

(12)

A subsidy is a grant or financial aid paid by the government to a producer, which lowers its costs. A firm reaches its short-run shut-down point when average revenue falls below average variable cost (AR < AVC), because it can no longer cover its variable costs; in the long run it must cover average total cost (AR ≥ AC) or it will leave the market. The proposed £150 million subsidy would have lowered Thomas Cook's costs, shifting its cost curves down so that AR could again cover AVC in the short run.

There are strong arguments for the subsidy. The collapse left 600 000 travellers stranded overseas, so the government had to pay to bring them home, and approximately 21 000 employees lost their jobs. The government then pays unemployment benefits and loses income tax revenue, and there are negative multiplier effects on suppliers such as hotels, airports and caterers. A subsidy of £150 million might have been cheaper than these costs. It could also have given banks and shareholders the confidence to provide further finance, buying time for the long-term turnaround strategy. Demand for package holidays might recover: an ageing population prefers the security of package holidays, and in a recession they may be seen as a cheaper option, while Brexit uncertainty was temporary.

However, there are strong arguments against. The £150 million is small compared with the £1.5 billion loss reported in May 2019, so it would only delay the closure: if AR is below AC in the long run, the firm would need repeated subsidies and could become a 'zombie firm'. Its problems were structural: the huge debts from the MyTravel merger, diseconomies of scale, and falling demand as consumers book online with competitors rather than at its 560 high street outlets, so its AR curve was shifting left. A subsidy treats the symptom rather than the cause.

There is also an opportunity cost: £150 million of taxpayers' money could instead be spent on the NHS or education, or reduce the budget deficit. As the Prime Minister said, a rescue

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creates moral hazard, teaching other businesses in commercial difficulty that the government will pick up the pieces, and rewarding directors who paid themselves large sums. Without the subsidy, rivals such as TUI and Jet2 can take over customers, routes and some staff, so resources are reallocated to more efficient firms, and the ATOL scheme protected travellers. In conclusion, the subsidy might have reduced short-run costs to the government and workers, but given the scale of the losses and the structural decline in demand for high street package holidays, it was unlikely to keep AR above AC in the long run. It depends on how credible the turnaround plan was; without that, the government was right to refuse, and support for workers and stranded travellers was a better use of public money.

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(e) With reference to the information provided, discuss the decision by Jet2 to increase its package holiday prices.

(15)

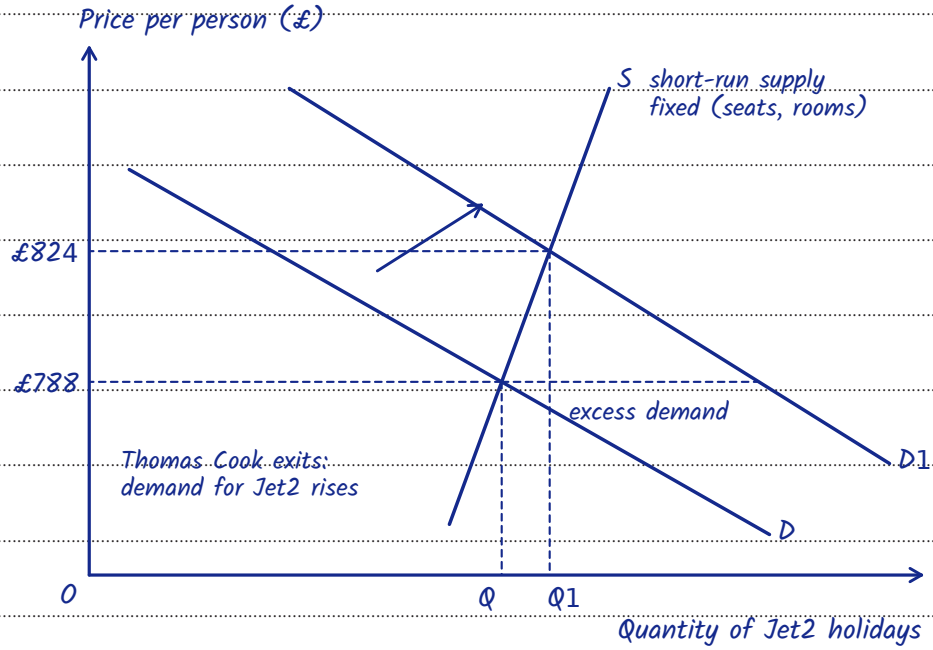
Figure 2 shows that 12 hours after Thomas Cook shut down, Jet2 raised the price per person of a 7-night holiday to Sorrento from £788 to £824, an increase of £36 or about 4.6% (from £1,576 to £1,648 for two adults).

One reason is market forces. Thomas Cook had a 13% share of the package holiday market (Figure 1), so its exit removed a large part of market supply. Its customers looked for close substitutes, so demand for Jet2 holidays increased, shifting the demand curve right from D to D1 in my diagram. In the short run the supply of holidays is fixed, as the number of plane seats and hotel rooms cannot be increased quickly, so supply is price inelastic. At £788 there is excess demand, so the price rises to £824 to ration the limited holidays and clear the market, giving Jet2 a signal and incentive to extend supply.

A second reason is increased market power. Jet2 had a 16% market share; if it gained most of Thomas Cook's 13%, its share could rise to close to 29%, level with TUI and above the 25% threshold for monopoly power. The market becomes more concentrated (the three-firm concentration ratio was 58%), moving towards a duopoly. With fewer substitutes, demand for Jet2's holidays becomes more price inelastic, so raising the price increases total revenue and profit. Jet2 may have been pricing at £788 to maximise sales or revenue, or limit pricing to compete with Thomas Cook, and can now set a profit maximising price at £824 where MC = MR. Consumer surplus is transferred to producer surplus, and as an oligopoly, interdependent firms such as TUI may follow the price rise through tacit collusion, as game theory suggests.

However, the decision should be evaluated. The increase is small, only 4.6%, which suggests Jet2 is not exploiting consumers heavily. It may reflect rising marginal costs, as Jet2 has to lease extra aircraft, buy more fuel, fly to new destinations and book hotel rooms at short notice. The evidence is also limited: it is one 'from' price, for one destination, from one

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airport, on one day, and holiday firms use dynamic pricing, so prices may fall again later. Demand may not rise as much as expected. Some consumers may decide not to book at all, staying at home or becoming anxious about firms closing and holidays being cancelled, while Thomas Cook's customers were ATOL protected and refunded. Market share may not be reallocated to Jet2: customers could switch to TUI, Expedia, On The Beach or BA Holidays, and Jet2 may not fly to the same destinations or from the same airports, so it is only a distant substitute. Other factors may also have raised demand, which may have been increasing before the collapse.

Higher prices may also harm Jet2 in the long run. Accusations of profiteering could damage its reputation, and supernormal profits may attract new entrants or extra capacity from rivals, pushing prices back down if the market is contestable. Firms are also unlikely to collude openly, as the CMA can fine them up to 10% of turnover and they fear a whistle-blower.

Overall, the price rise is mostly a rational short-run response to excess demand from the exit of a major rival, with a small element of increased market power. Its long-run effect depends on how quickly rivals add capacity, how much of Thomas Cook's market share Jet2

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gains, and whether consumers accept the higher price.

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(Total for Question 6 = 50 marks)

TOTAL FOR SECTION B = 50 MARKS

SECTION C

Answer ONE question from this section.

Write your answer in the space provided.

You are advised to spend 30 minutes on this section.

EITHER

7 The national living wage, the minimum wage for 25-year-olds and over, is expected to rise to more than £10.50 an hour in 2024 compared with £8.72 in 2020. The wage does not apply to the UK's self-employed and 'gig economy' workers.

Some economists said the increase was ambitious. Business groups warned that employers in sectors such as social care could be hit hard. In large parts of the north of England the living wage has already reached two-thirds of local median earnings, said Professor Shackleton.

(Source adapted from: https://www.theguardian.com/uk-news/2020/mar/11/budget-2020-national-living-wage-national-insurance)

Evaluate the disadvantages of a significant increase in the national living wage on a specific labour market, such as that for social care workers.

(Total for Question 7 = 25 marks)

OR

8 In many industries, such as banking, health insurance, internet search engines, pharmaceuticals, social media and telecommunications, there have been increases in market concentration.

Evaluate the possible consequences for business decision making of increased market concentration. Refer to industries of your choice in your answer.

(Total for Question 8 = 25 marks)

Indicate which question you are answering by marking a cross in the box ☒. If you change your mind, put a line through the box ☒ and then indicate your new question with a cross ☒.

Chosen question number: **Question 7** ☒ **Question 8** ☒

Write your answer here:

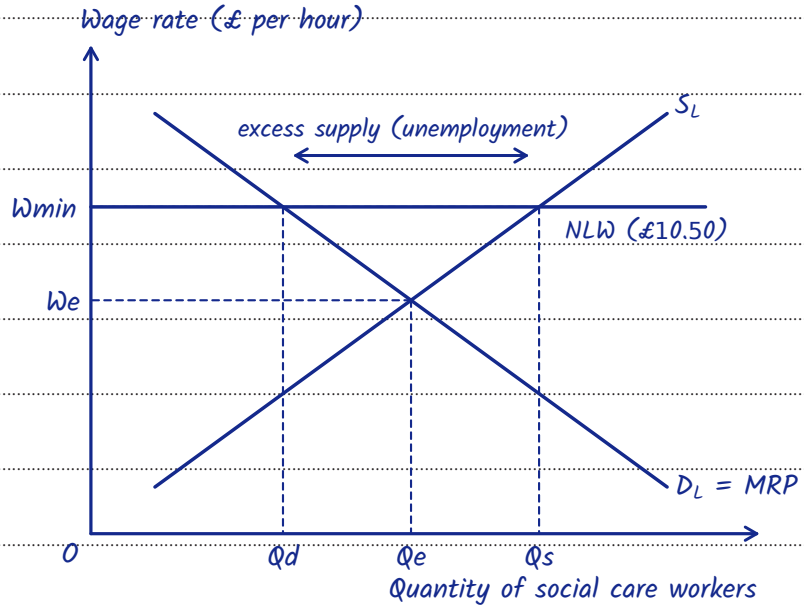
Question 7

The national living wage (NLW) is a legally enforced minimum wage, a wage floor, for workers aged 25 and over. It is planned to rise from £8.72 in 2020 to more than £10.50 in 2024, an increase of over 20%. In social care, where many workers are paid at or near the minimum, it is likely to be set above the market equilibrium wage.

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In my diagram, the free market equilibrium is at We and Qe. At the higher NLW, firms contract their demand for labour to Qd, as labour is more expensive, while more people want to work in social care, an extension in supply to Qs. The result is an excess supply of labour of Qs – Qd, which is unemployment in this specific labour market.

The size of this disadvantage depends on the wage elasticity of demand for labour. In social care, labour costs are a very high proportion of total costs, as care is labour intensive, so a rise in wages greatly increases costs and the demand for labour is relatively elastic. Demand for care workers is a derived demand from demand for care services. Care homes are largely funded by local councils with limited budgets, and many private payers are elderly people on fixed incomes, so they cannot easily absorb higher fees. Care homes may therefore cut staff hours, use zero-hours contracts or employ more self-employed and 'gig economy' workers, to whom the wage does not apply.

Business groups warned that employers in social care could be 'hit hard'. Higher variable costs cut profit margins; some care homes may make losses and close, reducing the number of places available for elderly people and putting more pressure on NHS hospitals, which cannot discharge patients. Where firms stay open, they may reduce quality, for example shorter visits or fewer staff per resident, or raise prices. In the north of England, where the

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NLW is already two-thirds of local median earnings, the impact is greater: the wage floor is further above the local equilibrium, so unemployment and closures are more likely, and differentials between experienced, qualified staff and new entrants are squeezed, reducing the incentive to gain skills.

Further disadvantages include higher costs for the government, which funds much social care, creating an opportunity cost, and possible cost-push inflation as firms pass on higher costs. Firms may also cut spending on training or non-wage benefits to offset the higher wage bill.

However, these disadvantages may be overstated. Firstly, the wage elasticity of demand for care workers may in fact be low in the short run: it is difficult to substitute capital for labour, since personal care requires human contact, and elderly people need care regardless of price, so demand for care is price inelastic. Unemployment may therefore be small. In the long run firms may find ways to substitute capital, such as monitoring technology, so job losses may grow over time.

Secondly, the social care labour market may be a monopsony, where a few large employers or local councils have buying power and pay wages below the competitive level. In that case a minimum wage can raise both wages and employment, as the marginal cost of labour becomes constant at the wage floor, so the disadvantages do not arise.

Thirdly, there are significant benefits. Social care suffers from labour shortages and high staff turnover, so a higher wage increases labour mobility into the sector, filling vacancies and reducing recruitment and training costs. Better paid workers may be more motivated and productive (efficiency wage theory), improving the quality of care and customer service. Firms may decide to invest in training because they are paying a higher wage. It also improves living standards and reduces relative poverty, particularly in the north of England, and raises tax revenue while reducing in-work benefits.

Fourthly, the effect depends on the elasticity of supply of labour and on whether the NLW

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is above the local equilibrium. In high wage areas such as London, it may be set below the market wage and have no effect. Labour is also not homogenous, and some workers may supply fewer hours at a higher wage if the income effect outweighs the substitution effect (a backward bending supply curve). Firms in other markets may be able to relocate or move into another market, but care homes cannot, as their customers are local.

In conclusion, a significant increase in the NLW is likely to cause some unemployment and closures in social care, particularly in the north of England where wages are already close to the floor and where councils fund care on tight budgets. However, the size of these disadvantages depends on the wage elasticity of demand, the degree of monopsony power and government funding. If the government increases social care funding alongside the NLW, the benefits of lower turnover, better quality care and reduced poverty may outweigh the costs.

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Question 8

Market concentration measures the share of total market sales held by the largest firms, shown by the concentration ratio. An increase means a few firms dominate, creating an oligopoly, or monopoly power where one firm has over 25% of the market. Google has over 90% of the internet search market, while UK banking is dominated by a few banks such as Lloyds, Barclays, HSBC and NatWest.

Firstly, increased concentration makes firms interdependent, so decisions must take account of rivals' likely reactions. Game theory shows that firms in a duopoly or oligopoly face a prisoner's dilemma: each would gain by cutting price, but if both do, profits fall. Price competition is therefore risky, and the kinked demand curve suggests prices are sticky. As a result, firms in industries such as telecommunications and banking often avoid price wars and use non-price competition such as advertising, branding, loyalty schemes and product differentiation.

Secondly, concentration increases the incentive to collude, either overtly through a cartel or tacitly through price leadership, where smaller firms follow the dominant firm's prices. By acting like a joint monopoly, firms can restrict output, raise prices and earn supernormal profits, reducing consumer surplus and choice.

Thirdly, dominant firms can make decisions to erect or maintain barriers to entry. Incumbents may use limit pricing, setting price low enough to deter entry, or predatory pricing to drive out new rivals. Social media firms such as Facebook have used takeovers of potential rivals like Instagram and WhatsApp to protect their market power. Large firms also benefit from economies of scale and network effects, which act as natural barriers.

Fourthly, monopoly power allows firms to choose their objective. With less competitive pressure, a firm may profit maximise where MC = MR, charging a price above marginal cost, or practise price discrimination, as pharmaceutical firms do by charging different prices in different countries. Alternatively, managers may pursue growth, sales or revenue maximisation,

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or satisfice. Firms with monopsony power, like large supermarkets, can also squeeze suppliers, reducing their producer surplus.

Finally, higher profits give firms more choice over investment. Large supernormal profits allow pharmaceutical companies and Google to spend heavily on research and development, leading to dynamic efficiency and new products. However, without competition firms may become x-inefficient and lack incentive to innovate.

However, the consequences depend on several factors. Regulation curtails business decisions: the CMA and the European Commission can fine firms up to 10% of turnover for anti-competitive behaviour, block mergers or force demergers, and regulators such as Ofcom set price caps in telecommunications. Google has been fined billions of euros for abusing its dominant position, so firms may avoid collusion or predatory pricing for fear of fines or whistle-blowers. However, regulatory capture and asymmetric information may limit the regulator's effectiveness.

Secondly, contestability matters. If barriers to entry are low, as in parts of banking where challenger banks such as Monzo and Starling have entered using technology, dominant firms must price as if the market were competitive, so limit pricing acts as a surrogate for competition and consumers benefit even if concentration is high.

Thirdly, competition may continue between a few large firms. Price wars sometimes break out, as in UK mobile phone contracts, and non-price competition can act in the consumer interest through technological advances, better quality and customer service. Concentration may therefore not lead to higher prices.

Fourthly, there are wider benefits from industry giants: Amazon and Google provide employment, tax revenue and a marketplace for SMEs, and re-invest profits. If dominant firms are broken up, these dynamic efficiency gains and economies of scale may be lost, raising average costs.

Finally, consequences differ between industries and over time. In pharmaceuticals, patents

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give temporary monopoly but R&D drives decisions, while in social media network effects make dominance long-lasting. Rapid technological change can erode market power, as shown when Facebook overtook MySpace.

In conclusion, increased market concentration is likely to make firms more interdependent and more willing to avoid price competition, collude tacitly, erect barriers to entry and pursue profit maximisation. However, the extent depends on how contestable the market is, how strictly the CMA and other regulators act and whether firms use their profits for innovation. In regulated industries such as banking and telecommunications the consequences are limited, but in digital markets like search engines and social media, where network effects are strong, concentration gives dominant firms much more freedom in their decision making.

TOTAL FOR SECTION C = 25 MARKS
TOTAL FOR PAPER = 100 MARKS

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