PEARSON EDEXCEL IAL ECONOMICS · YEC11

ECONOMICS



MARK SCHEME

UNIT 3: REVENUE, COSTS AND PROFITS

SCORE	PERCENTAGE
/188	%

STEMUP

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Mark Scheme

Q1.

Question	Quantitative skills assessed	Answer	Mark
	QS4: Construct and interpret a range of standard graphical forms **QS6: Calculate cost, revenue and profit (marginal, average, totals)** **QS9: Interpret, apply and analyse information in written, graphical, tabular and numerical forms.**	**The only correct answer is C** A is incorrect because decreasing returns to scale would relate to the long-run average cost curve B is incorrect because fixed costs would not be included in marginal costs D is incorrect because diseconomies of scale would relate to the long-run average cost curve	**(1)**

Q2.

Question	Quantitative skills assessed	Answer	Mark
	QS4: Construct and interpret a range of standard graphical forms **QS9: Interpret, apply and analyse information in written, graphical, tabular and numerical forms.**	**The only correct answer is B** A is incorrect because the equilibrium output is not at the lowest point of the AC curve C is incorrect because the revenue curves would be perfectly elastic D is incorrect because the firm is making normal profit	**(1)**

Q3.

Question Number	Quantitative skills assessed	Answer	Mark
	QS9: Interpret, apply and analyse information in written, graphical, tabular and numerical forms.	**The only correct answer is B** **A** *is not correct because if TR is rising at a constant rate then MR will be constant* **C** *is not correct because if TR is rising at a constant rate then MR will be constant and positive* **D** *is not correct because if TR is rising at a constant rate then MR will be constant and positive*	**(1)**

Q4.

Question	Quantitative skills assessed	Answer	Mark
	QS4: Construct and interpret a range of standard graphical forms **QS9:** Interpret, apply and analyse information in written, graphical, tabular and numerical forms.	**The only correct answer is D** A is incorrect because marginal costs are rising B is incorrect because there are diseconomies of scale C is incorrect because marginal costs are rising	**(1)**

Q5.

Question	Quantitative skills assessed	Answer	Mark
	QS6: Calculate cost, revenue and profit (marginal, average, totals) **QS9: Interpret, apply and analyse information in written, graphical, tabular and numerical forms.**	**The only correct answer is C** A is incorrect because this is the difference in the wage rates B is incorrect because this is the additional $20 paid for 41 workers D is incorrect because this is the total cost of wages	**(1)**

Q6.

Question	Quantitative skills assessed	Answer	Mark
	QS6: Calculate cost, revenue and profit (marginal, average and total) **QS9:** Interpret, apply and analyse information in written, graphical, tabular and numerical forms.	The correct answer is **C** **A** is incorrect because this is average fixed costs at 300 units **B** is incorrect because this is average variable costs at 400 units **D** is incorrect because this is average total costs at 300 units	**(1)**

Q7.

Question	With reference to Figure 1, calculate the percentage change in Amazon's revenue between 2010 and 2020. **Answer**	Mark
	Application 2 **Quantitative skills assessed:** **QS2:** Calculate, use and understand percentages, percentage changes and percentage point changes. **QS9:** Interpret, apply and analyse information in written, graphical, tabular and numerical forms Up to 2 marks for calculation: • (386.06-34.20)/34.20 **(1) or** 351.86/34.20**(1)** 10.2883 x 100 = 1028.83% **(1)** **Accept within the range 1028 to 1029** **Award full marks for correct answer regardless of working.** **Accept 1029/1028.8/1028.83**	**(2)**

Q8.

Question	With reference to Figure 1, calculate the change in Uniqlo's total costs between 2021 and 2022. **Answer**	**Mark**
	Application 2 **Quantitative skills assessed:** **QS6:** Calculate cost, revenue and profit (marginal, average, totals) **QS9:** Interpret, apply and analyse information in written, graphical, tabular and numerical forms. Up to 2 marks for calculation: 2021 total costs: (2132 - 1073) = ¥1 059 bn 2022 total costs: (2301 - 1206) = ¥1 095 bn 1 095 – 1 059 **(1)** Change in total costs = ¥36 bn **(1)** Percentage change (36/1059) x 100 **(1)** = 3.4% **(1)** **NB: Award full marks for correct answer (36 bn/ 3.4%) regardless of working** **Award only 1 mark if billion/% is not included in final answer**	**(2)**

Q9.

Question	With reference to Figure 1, calculate the percentage change in electric car sales from 2013 to 2017. You are advised to show your working. **Answer**	**Mark**
	Application 2 Quantitative skills assessed: **QS2**: Calculate, use and understand percentages, percentage changes and percentage point changes. **QS9**: Interpret, apply and analyse information in written, graphical tabular and numerical forms. 2 marks for correct workings and calculation: • 13 597 – 2 512 = 11 085 **(1)** • 11 085/2 512 x 100 = 441.28% **(2)** **Accept 441% to 441.3%** **NB: If correct answer is given award full marks regardless of working.**	**(2)**

Q10.

Question	With reference to Figure 1, calculate the percentage change in the wholesale price of gas from 1 April 2021 to 1 April 2022. You are advised to show your working. **Answer**	Mark
	Application 2 **Quantitative skills assessed:** **QS2:** Calculate, use and understand percentages, percentage changes and percentage point changes **QS9:** Interpret, apply and analyse information in written, graphical, tabular and numerical forms. Up to 2 marks for calculation: · 280p – 47p = 233p **(1)** 233p/47p x 100= 495.74% **(1)** **NB: Award full marks for correct answer (495.7447%, 495.745%, 495.7%, 496%) regardless of working** **Award full marks if % missing**	**(2)**

Q11.

Question	With reference to Figure 1, calculate the percentage change in Deliveroo's total revenue between 2017 and 2021. **Answer**	Mark
	Application 2 **Quantitative skills assessed:** **QS2:** Calculate, use and understand percentages, percentage changes and percentage point changes **QS9:** Interpret, apply and analyse information in written, graphical, tabular and numerical forms. Up to 2 marks for calculation: (1824-277)=1547 **(1)** (1547/277)x 100 =558.48% **(1)** **NB: Award full marks for correct answer (558.48, 558.5, 558, 559) regardless of working. Award full marks if % is omitted.**	**(2)**

Q12.

Question Number	Answer	Mark
	Quantitative skills assessed: **QS2**: Calculate, use and understand percentages, percentage changes and percentage point changes. **Application** Up to 2 marks for calculation: • Rs5.3bn - Rs 3.7bn = Rs1.6bn **(1)** • Rs1.6bn/Rs3.7bn x 100 = 43.24% or 43.2% or 43% **(1)** **Accept 43%, 43.2%, 43.24%, 43.243%, 43.2432% and other responses up to 43.2432432432%** **NB: If correct answer (eg 43.24%) is given award full marks regardless of working.**	**(2)**

Q13.

Question Number	Answer	Mark
	QS6: Calculate cost, revenue and profit. **QS9**: Interpret, apply and analyse information in written, graphical, tabular and numerical forms. **Application 2** Up to 2 marks for calculation: • Total costs = total revenue - profit **(1)** **OR** • 73822 bn Rs - 22854 bn Rs **(1)** • = 50968 bn Rs **(1)** **NB: Award full marks for correct answer regardless of working.** **If Bn omitted from answer award 1 mark only**	**(2)**

Q14.

Question	Quantitative skills assessed	Answer	Mark
	QS4: Construct and interpret a range of standard graphical forms **QS9: Interpret, apply and analyse information in written, graphical, tabular and numerical forms.**	**The only correct answer is D** A is incorrect because the firm would be making supernormal profits B is incorrect because this is the long-run shut-down position C is incorrect because the firm will continue to operate in the short-run	**(1)**

Q15.

Question	Quantitative skills assessed	Answer	Mark
	QS4: Construct and interpret a range of standard graphical forms **QS9: Interpret, apply and analyse information in written, graphical, tabular and numerical forms.**	**The only correct answer is C** A is incorrect because higher rent would cause supernormal profits to decrease B is incorrect because higher rent would cause supernormal profits to decrease but the price remains constant D is incorrect because the supernormal profit would decrease and the price remains constant	**(1)**

Q16.

Question	Quantitative skills assessed	Answer	Mark
	QS4: Construct and interpret a range of standard graphical forms **QS6: Calculate cost revenue and profit (marginal, average, totals)** **QS9: Interpret, apply and analyse information in written, graphical, tabular and numerical forms.**	**The only correct answer is C** A is incorrect because this is the AFC at 20 000 shirts B is incorrect because this is the AFC at 15 000 shirts D is incorrect because this is the AFC at 5 000 shirts	**(1)**

Q17.

Question	Quantitative skills assessed	Answer	Mark
	QS4: Construct and interpret a range of standard graphical forms **QS6:** Calculate cost, revenue and profit (marginal, average, totals) **QS9:** Interpret, apply and analyse information in written, graphical, tabular and numerical forms.	**The only correct answer is A** B is incorrect because this is average variable cost C is incorrect because this is average fixed cost at an output of 10 000 D is incorrect because this is the average total cost at an output of 20 000	**(1)**

Q18.

Question	With reference to Figure 2, calculate the change in AstraZeneca's total costs between 2021 and 2022. You are advised to show your workings. **Answer**	Mark
	Application 2 **Quantitative skills assessed:** **QS9:** Interpret, apply and analyse information in written, graphical, tabular and numerical forms. 1 mark for calculation of total costs in 2021 **or** 2022: $36 541m - $1 056m = $35 485m / $42 998m - $3 757m = $39 241m **(1)** 1 mark for calculation of the actual change **or** percentage change of total costs $39 241m - $35 485m = $3 756m/ $3 756m ÷ $35 485m x 100 = 10.58% **(1)** **NB: Award full marks for correct answer ($3 756m /10.58%) regardless of working** **Accept reasonable rounding of percentage change (10.58%, 10.6%, 11%)** **N.B. Award 1 mark for $3 756 or 3 756 where m is omitted or 10.58 where % sign is omitted**	**(2)**

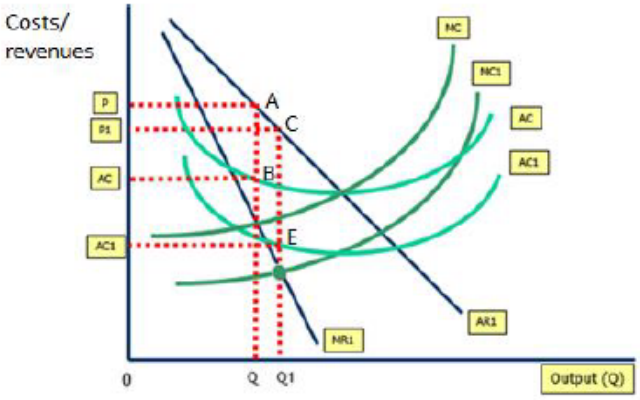
Q19.

Question	Quantitative skills assessed	Answer	Mark
	QS4: Construct and interpret a range of standard graphical forms **QS6:** Calculate cost, revenue and profit (marginal, average, totals) **QS9:** Interpret, apply and analyse information in written, graphical, tabular and numerical forms.	**The only correct answer is D** A is incorrect because the producer surplus will decrease B is incorrect because fixed costs will not change C is incorrect because this is likely to cause a decrease in dynamic efficiency	**(1)**

Q20.

Question	With reference to Extract A, analyse **two** reasons why the global fast-food market is expected to grow. **Answer**	
	Knowledge 2 Application 2 Analysis 2 **Quantitative skills assessed:** **QS9**: Interpret, apply and analyse information in written, graphical, tabular and numerical forms. **Knowledge and analysis** Up to 2 knowledge marks for identifying two reasons and up to 2 analysis marks for linked explanations: • A rise in the number of people living in cities **(1K)** means there are more potential customers to use fast food outlets/means there will be more demand for fast-food **(1AN)** • Change in lifestyles **(1K)** meaning the convenience of quick meals/fast-food is needed **(1AN)** • Affordability **(1K)** lower real incomes make people substitute expensive meals for fast food **(1AN)** • Marketing expenditures/branding **(1K)** increasing awareness/appeal of fast-food **(1AN)** • Greater use of mobile applications **(1K)** increases convenience for consumers when ordering fast food for home delivery **(1AN)** **Application** Up to 2 marks for use of Extract A e.g. • Between 2010 and 2021 the population living in cities increased from 3.59 billion to 4.59 billion **(1AP)** • Limited time for preparing meals **(1AP)** • Slow wage growth/ increased living costs **(1AP)** • In 2020 fast-food companies spent $4.5 billion on advertising **(1AP)** • In 2023 Zomato was downloaded 52 million times/Uber Eats 41 million times **(1AP)**	

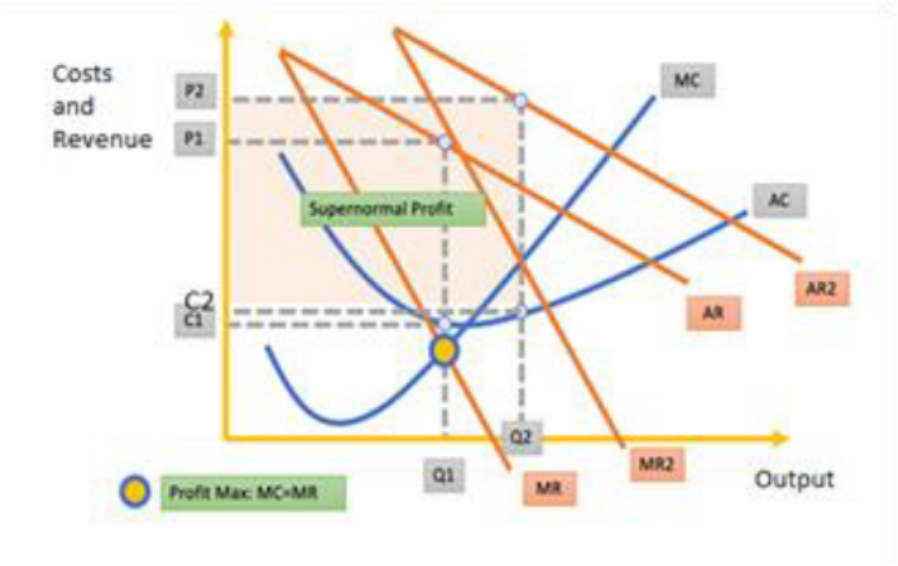
Q21.

Question	With reference to Figure 2 and Extract B, examine the likely impact on the profits of Samsung of opening a smartphone factory in India. Use an appropriate diagram in your answer. **Answer**	Mark
	Knowledge 2 Application 2 Analysis 2 Evaluation 2 **Quantitative skills assessed:** **QS4**: Construct and interpret a range of standard graphical forms **QS9**: Interpret, apply and analyse information in written, graphical, tabular and numerical forms.  **Knowledge** **Up to 2 marks for drawing a diagram that shows knowledge of:** • Original MC, AC, MR, AR, with profit maximising equilibrium **(1)** • Fall in costs showing downward shift in AC to AC_1 / **Or** • a downward shift in both AC to AC_1 and MC to MC_1 **(1)** **Analysis** Up to 2 marks for impact on supernormal profits e.g.**:** • Original supernormal profits A,B,AC,P **(1)** • New supernormal profit area C,E,AC1,P1 **(1)** **Application** • Labour costs in India are 50% lower than in China **(1)** • Skilled labour costs up to 15% less than in China • The Make in India programme offers tax relief to firms producing in India **(1)** • Transportation costs are reduced **(1)**	

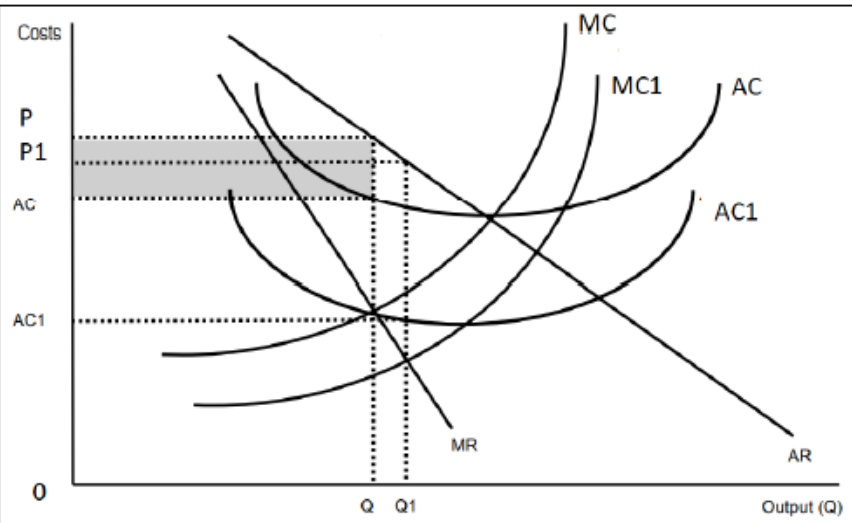
	Evaluation **Up to 2 marks for evaluative comments (2+0 or 1+1), e.g.:** • Imported components are expensive and taxed at 12.5% increasing costs if not purchasing lower priced components in the expanding Indian market **(1)** • Insufficient supply of domestic smartphone components forcing firms to purchase expensive imports **(1)** • Labour costs would be even lower if firms manufactured in Indonesia or Vietnam **(1)** • The power supply is unreliable so reducing output **(1)** increasing costs and lowering profit **(1)** • Transport costs may rise **(1)** as it is slow and costly reducing profits **(1)**	**(8)**

Q22.

Question	With reference to the information provided, discuss the reasons for the increase in Starbucks' profits in 2019. For **one** of these reasons, illustrate your answer with an appropriate cost and revenue diagram.
	Indicative content guidance Answers must be credited by using the level descriptors (below) in line with the general marking guidance. The indicative content below exemplifies some of the points that candidates may make but this does not imply that any of these must be included. Other relevant points must also be credited. **Knowledge, Application, Analysis (8 marks) – indicative content** • Definition of profits = total revenue - total costs • Starbucks revenue increased by 7.24% in 2019 • Starbucks profits increased by 7.11% to $17.98 billion • Globally sales of coffees have increased by 2%, this would increase both the average revenue and marginal revenue curves outwards, increasing profits • Many new shops opening in China • Attracting younger coffee drinkers • Diagram to show an increase in both average revenue and marginal revenue shifting outwards with a new equilibrium price and quantity showing profit increasing



- AR and MR increase to AR2 MR2 with a higher area of profit from P1C1 x 0Q1 to P2C2 x 0Q2
- The price of coffee beans has fallen to $1.57 per kg in May 2019 reducing the costs of production for coffee shops. This would cause the marginal cost and average costs curve to fall, increasing profits



The fall in the price of coffee beans causes the MC1 and AC1 to fall, creating a higher output at a lower price. Profit increases from PAC x 0Q to P1AC1 x 0Q1.

Maximum level 2 if no diagram
Maximum level 2 if only one reason is discussed

Level	Mark	Descriptor
	0	No rewardable material.
Level 1	1–3	Displays isolated, superficial or imprecise knowledge and understanding of economic terms, principles, concepts, theories and models. Use of generic material or irrelevant information or inappropriate examples. Descriptive approach which has no chains of reasoning.
Level 2	4–6	Displays elements of knowledge and understanding of economic terms, principles, concepts, theories and models. Ability to apply knowledge and understanding to some elements of the question. Some evidence and contextual references are evident in the answer. Chains of reasoning in terms of cause and/or consequence are evident but they may not be developed fully or some stages are omitted.
Level 3	7–8	Demonstrates accurate and precise knowledge and understanding of economic terms, principles, concepts, theories and models. Ability to link knowledge and understanding in context using relevant examples which are fully integrated to address the broad elements of the question. Analysis is clear, coherent, relevant and focused. The answer demonstrates logical and multi-stage chains of reasoning in terms of cause and/or consequence.

	Evaluation (6 marks) – indicative content • The price of coffee beans fluctuates and costs may increase in the long-run reducing profits • Other costs of production may increase offsetting the fall in costs from the reduction in the price coffee beans, reducing overall profits • Costs of advertising and expansion will reduce overall profits • A large number of firms competing in the coffee shop market which may reduce sales and revenue in the long-run • A 32% fall in price of coffee beans is very large and might have had a significant impact on profits • The impact of the fall in the price of coffee beans on Starbucks' profits depends on the significance of coffee beans as a proportion of total costs • The rise in profits might be short-term only

Level	Mark	Descriptor
	0	No rewardable material.
Level 1	1–2	Identification of generic evaluative comments. No supporting evidence/reference to context. No evidence of a logical chain of reasoning.
Level 2	3–4	Evidence of evaluation of alternative approaches Some supporting evidence/reference to context. Evaluation is supported by a partially-developed chain of reasoning.
Level 3	5–6	Evaluation recognises different viewpoints and/or is critical of the evidence. Appropriate reference to evidence/context. Evaluation is supported by a logical chain of reasoning.

Q23.

Question Number	With reference to Extracts A and B and your own knowledge, discuss the types of non-price competition that could be used by car manufacturers to increase the sales of cars. Indicative content
	Indicative content guidance Answers must be credited by using the level descriptors (below) in line with the general marking guidance. The indicative content below exemplifies some of the points that candidates may make but this does not imply that any of these must be included. Other relevant points must also be credited. Quantitative skills assessed: **QS9:** Interpret, apply and analyse information in written, graphical, tabular and numerical forms

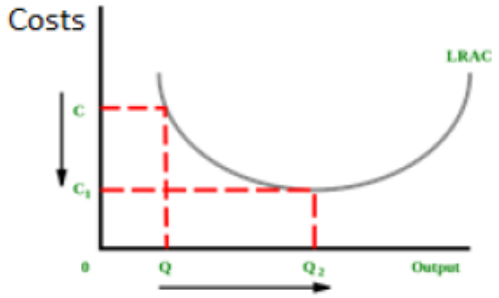
	Knowledge, Application, Analysis (8 marks) – indicative content • Non-price competition involves ways to increase sales and attract custom through methods other than price • Methods of non-price competition include: product differentiation, advertising and branding, quality, endorsement, product placement, after sales service • Car manufacturers operate in an oligopolistic market with high levels of interdependence • Innovation and quality are important to the Chinese consumer • 79% of consumers plan to purchase a connected-car in the future • Chinese consumers are highly influenced by reputation of the firm and social media when choosing to purchase a car • Younger consumers are attracted to cars with a more modern design • Non-price competition is important as it increases demand and revenue • Non-price competition can increase the profits for Chinese car manufacturers • Number of joint-ventures able to offer product differentiation e.g. Alibaba and BMW **Maximum L2 if no reference to car manufacturers**

Level	Mark	Descriptor
	0	No rewardable material.
Level 1	1–3	Displays isolated, superficial or imprecise knowledge and understanding of economic terms, principles, concepts, theories and models. Use of generic material or irrelevant information or inappropriate examples. Descriptive approach which has no chains of reasoning.
Level 2	4–6	Displays elements of knowledge and understanding of economic terms, principles, concepts, theories and models. Ability to apply knowledge and understanding to some elements of the question. Some evidence and contextual references are evident in the answer. Chains of reasoning in terms of cause and/or consequence are evident but they may not be developed fully or some stages are omitted.
Level 3	7–8	Demonstrates accurate and precise knowledge and understanding of economic terms, principles, concepts, theories and models. Ability to link knowledge and understanding in context using relevant examples which are fully integrated to address the broad elements of the question. Analysis is clear, coherent, relevant and focused. The answer demonstrates logical and multi-stage chains of reasoning in terms of cause and/or consequence.

	Evaluation (6 marks) – indicative content • Some types of non-price competition are likely to be more expensive than others e.g. advertising at prime time on TV may be more expensive than branding • Some types of non-price competition may be more effective (in increasing demand and making demand less price elastic) than others e.g. connected-cars; high quality may be more effective than branding • The most significant factor when buying a car for many young Chinese consumers is the environment. Therefore, other forms of non-price competition may not as significant • Price is the most important factor as new cars are expensive and this is causing their demand to fall • New car sales have declined in China as consumers seek low-cost alternatives • There are lots of available substitutes to cars • Consumers are using car-hailing apps instead of cars as they are more price competitive • Electric cars are becoming more price competitive as the government is subsidising them and other car manufacturers will need to lower their price to compete.

Level	Mark	Descriptor
	0	No rewardable material.
Level 1	1–2	Identification of generic evaluative comments. No supporting evidence/reference to context. No evidence of a logical chain of reasoning.
Level 2	3–4	Evidence of evaluation of alternative approaches Some supporting evidence/reference to context. Evaluation is supported by a partially-developed chain of reasoning.
Level 3	5–6	Evaluation recognises different viewpoints and/or is critical of the evidence. Appropriate reference to evidence/context. Evaluation is supported by a logical chain of reasoning.

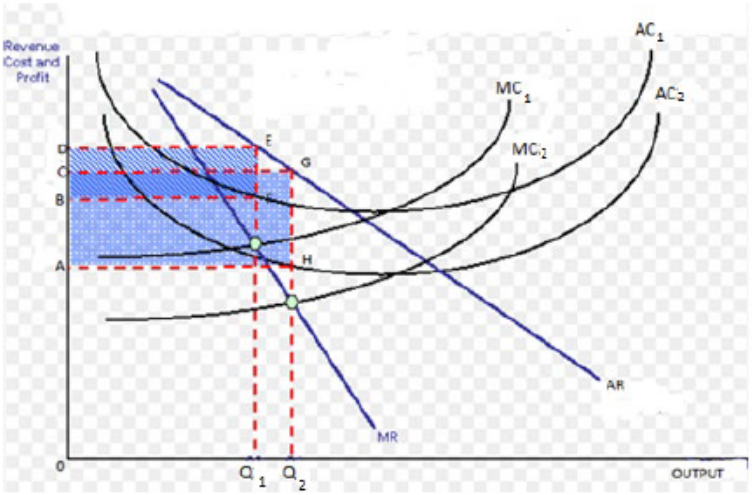
Q24.

Question	With reference to Extract B, explain what is meant by 'economies of scale'. **Answer**	Mark
	Knowledge 2 Application 2 **Quantitative skills assessed:** **QS9**: Interpret, apply and analyse information in written, graphical, tabular and numerical forms. **Knowledge:** Up to 2 marks for the definition of economies of scale: When long-run average costs fall **(1)** as output increases **(1)**  Diagram showing LRAC **(1)** with correct annotation to show LRAC falling as output increases **(1)** **Application:** Up to 2 marks for application to the context e.g.: • Samsung has set up in India to benefit from economies of scale **(1)** for example, technical/purchasing/marketing **(1)** • Samsung opened the world's largest mobile phone factory **(1)** • Foxconn has set up in India to reduce long-run average costs **(1)**	**(4)**

Q25.

Question	With reference to Extract A, analyse **two** ways that pharmaceutical companies may benefit from external economies of scale. **Answer**	
	Knowledge 2 Application 2 Analysis 2 **Quantitative skills assessed:** **QS9**: Interpret, apply and analyse information in written, graphical, tabular and numerical forms. **Knowledge and analysis** Up to 2 knowledge marks for identifying two ways and up to 2 analysis marks for linked explanations: • Skilled workforce **(1K)** with specialised knowledge relevant to that industry/ reducing recruitment/training costs **(1AN)** • Improved infrastructure/ investment in road and railways **(1K)** reducing transportation time/ costs/ improves labour mobility **(1AN)** • Research partnerships **(1K)** locating close to other firms makes resource sharing easier/ reducing R&D costs **(1AN)** • Low rate of corporation tax **(1K)** provides a cost advantage of operating in Ireland/ meaning more profits are kept by pharmaceutical businesses in Ireland **(1AN)** **Application** Up to 2 marks for use of the context e.g. • Over 85 pharmaceutical companies operate in Ireland **(1)** • Approximately 30 000 highly skilled workers **(1)** • Invested heavily/ €35 billion investment into the country's transport system / in improving roads and railways **(1)** • **Businesses and universities** share research and development (R&D) costs **(1)** • Students leave university with the skills required to work in the pharmaceutical industry **(1)** • Corporation tax rate of 12.5% **(1)**	

Q26.

Question	With reference to Extract A, examine the likely effect of a decrease in variable costs on Tesla's profits. Illustrate your answer with an appropriate diagram(s). **Answer**	Mark
	Knowledge 2 Application 2 Analysis 2 Evaluate 2 Quantitative skills assessed: **QS4**: Construct and interpret a range of standard graphical forms **QS9:** Interpret, apply and analyse information in written, graphical, tabular and numerical forms.  **Knowledge** Up to 2 marks for drawing a diagram that shows knowledge of: • Original supernormal profit/loss area **(1)** • New supernormal profit/loss area after MC and AC shift downwards **(1)**	

	Analysis Up to 2 marks for explanation of or diagrammatic representation of: • Profit maximising price will fall from 0D to 0C **(1)** • Increase in profit maximising output from 0Q1 to 0Q2 **(1)** • Revenue would rise from 0D x 0Q1 to 0C x 0Q2 **(1)** **N.B. Allow 1 mark for answers which have only shifted AC curve as follows** • Increase in supernormal profit/fall in loss **(1)** **Application** Up to 2 marks for reference to Extract A, e.g.: • Senior managers are considering ways of decreasing variable costs **(1)** • Lower cost car parts **(1)** • Reducing the number of workers on production lines **(1)** • Tesla making a quarterly loss of $709.6m in one quarter **(1)**	

	Evaluation Up to 2 marks for evaluative comments, e.g.: • Magnitude: depends on size of the fall in variable cost **(1)**, a small change will have little impact because Tesla's losses are significant **(1)** • Rise in profit (lower loss) will depend on Tesla's ability to meet demand **(1)** because there have been significant problems regarding failure to meet production targets e.g. a major shortfall in December 2017 **(1)** • Using cheaper car parts may result in a fall in consumer demand **(1)** as consumers switch to better quality cars sold by competitors **(1)** • Reducing workers on production line will reduce output levels further **(1)** leading to larger short-term losses **(1)** • Rise in profit (lower loss) may be offset by a rise in fixed cost/fall in demand **(1)**, which would cause an upward shift in AC curve/ downward shift in AR and MR curves **(1)**	**(8)**

Q27.

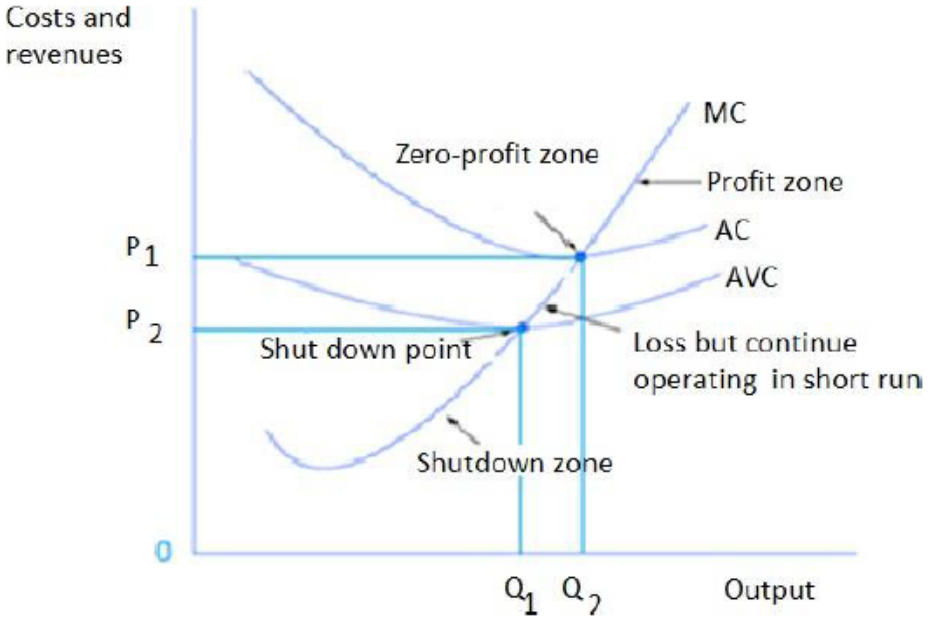
Question	With reference to Extract A, examine **two** likely effects of the global health crisis on Amazon's profits. **Answer**	Mark
	Knowledge 2 Application 2 Analysis 2 Evaluation 2 **Quantitative skills assessed: QS9**: Interpret, apply and analyse information in written, graphical, tabular and numerical forms. **Knowledge, analysis and application** For each of the two effects identified: 1 mark for application to Extract A, 1 analysis mark for expansion of this and 1 mark for knowledge linked to profit e.g. As consumers could not access physical stores **(1AP)** leading to increased demand for goods and services from Amazon **(1AN)** resulting in increased profit **(1K)** As Amazon increased their sales to $386.1 billion **(1AP)** due to higher demand for online shopping **(AN)** resulting in increased profit **(1K)** Additional 400 000 workers employed by Amazon **(1AP)** this increase in number of workers employed adding to costs **(1AN) resulting in** decreased profit **(1K)** Due to a fall in labour productivity **(1AP)** as the workforce at Amazon expanded so rapidly **(1AN)** resulting in decreased profit **(1K)** Increase in costs of production by $4 billion **(1AP)** reducing profit margins **(1AN)** resulting in decreased profit **(1K)**	**(8)**

	Evaluation **Up to 2 marks for evaluative comments, e.g.:** • The effect on profit depends on the relative increase in revenues and costs. Revenues increased by $105.6 billion whereas costs of production increased by $4 billion **(1+1)** • The increase in revenues may not be sustained in the long-run if the global health crisis is resolved as shops will reopen and consumers use alternatives to Amazon **(1+1)** • The increase in revenues may not be sustained in the long-run if the global health crisis continues **(1+1)** • With experience, staff will become more skilled, helping to improve productivity in the long-run **(1+1)** • Amazon may substitute out labour for capital due to lower productivity helping to restore profits in the long-run **(1+1)**	

Q28.

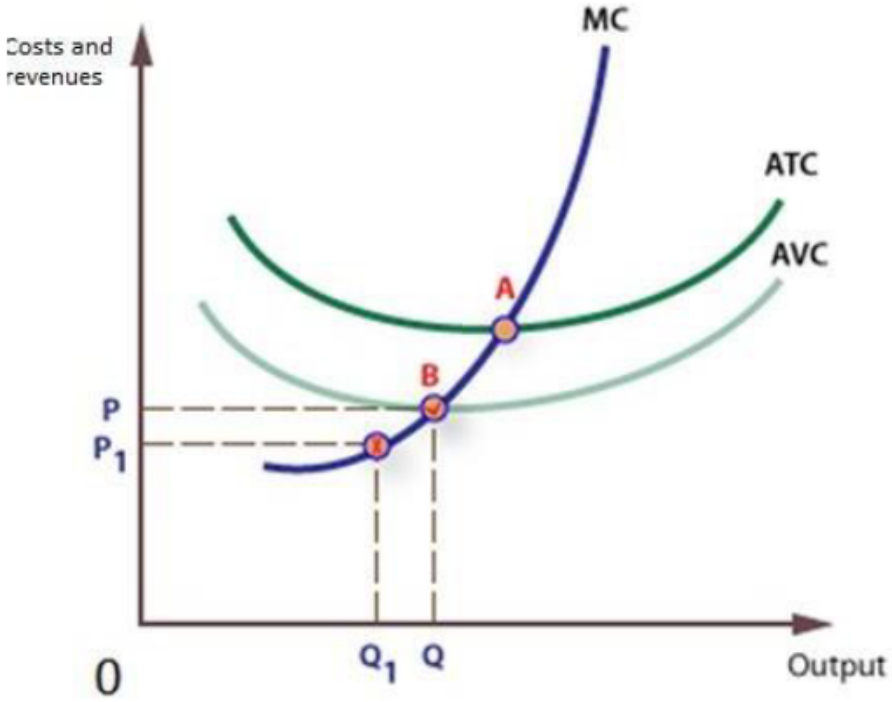
Question	Evaluate the view that a business will always shut down if it is not able to make a normal profit. Illustrate your answer with an appropriate diagram(s).
	Indicative content
	Indicative content guidance Answers must be credited by using the level descriptors (below) in line with the general marking guidance. The indicative content below exemplifies some of the points that candidates may make, but this does not imply that any of these must be included. Other relevant points must also be credited. **Quantitative skills assessed:** **QS4:** Construct and interpret a range of standard graphical forms. **QS9:** Interpret, apply and analyse information in written, graphical, tabular and numerical forms. **Knowledge, Application, Analysis (12 marks) – indicative content** Indicative content

Short-run shut down point



- In the short-run Toys "R" Us would continue to operate even if it is making a loss as long as it is covering its average variable costs. At any point below this the business must shut down because it is not able to cover its variable costs of production.

Long-run shut-down point



- In the long-run a business such as Toys "R" Us will keep producing at point A, as it is able to cover its average total costs. This includes its opportunity cost. The business would shut down at a price and output below this because it cannot cover its total costs of production. For example, in 2018 as Toys "R" Us couldn't cover its costs and so it was forced to close down.
- Resources employed in the output of toys could be better invested in the production of other goods and services
- In the short-run the market mechanism allows average revenues to increase if less efficient firms leave the market so the incumbent firms can achieve normal profit in the long run

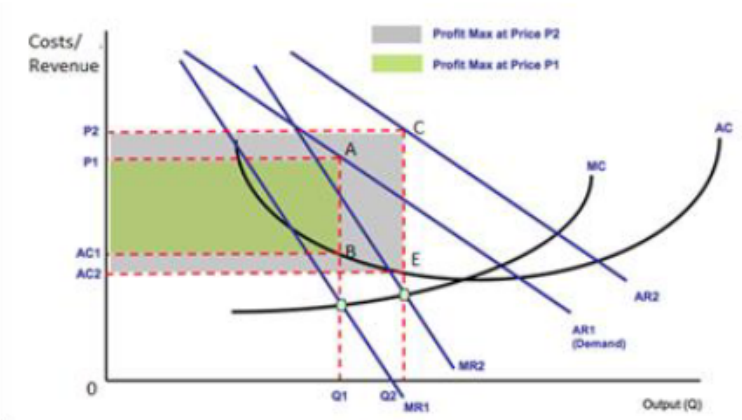
NB if no diagram candidate can achieve a maximum of level 3
NB also accept imperfectly competitive market

Level	Mark	Descriptor
	0	No rewardable material.
Level 1	1–3	Displays isolated, superficial or imprecise knowledge and understanding of economic terms, principles, concepts, theories and models. Use of generic material or irrelevant information or inappropriate examples. Descriptive approach which has no chains of reasoning.
Level 2	4–6	Displays elements of knowledge and understanding of economic terms, principles, concepts, theories and models. Limited application of knowledge and understanding to economic problems in context. A narrow response or superficial, only two-stage chains of reasoning in terms of cause and/or consequence.
Level 3	7–9	Demonstrates accurate knowledge and understanding of economic terms, principles, concepts, theories and models. Ability to apply knowledge and understanding to some elements of the question. Some evidence and contextual references are evident in the answer. Analysis is clear and coherent. Chains of reasoning in terms of cause and/or consequence are evident but they may not be developed fully or some stages are omitted.
Level 4	10–12	Demonstrates accurate and precise knowledge and understanding of economic terms, principles, concepts, theories and models. Ability to link knowledge and understanding in context using appropriate examples which are fully integrated to address the broad elements of the question. Analysis is clear, coherent, relevant and focused. The answer demonstrates logical and multi-stage chains of reasoning in terms of cause and/or consequence.

	Evaluation (8 marks) – indicative content
	• Objectives of businesses: if a business is establishing itself/trying to survive it may continue to operate even if it is making a loss, for example, during the global health crisis • If it is a state-owned business/charity, the business can run at a loss • Financial obligations that the business cannot meet if it shuts down, such as paying off debts or fulfilling contracts • Hope of recovery from the business's current situation and return to profitability • Loss of reputation • Legal Requirements. For example, if the business is in the middle of a project that it is contractually obligated to complete, it may need to stay open until the project is finished • The business might survive if it acquired by another business • The business might survive if the government provides a subsidy • A business might survive if it is part of a large conglomerate and there is cross subsidisation

Level	Mark	Descriptor
	0	No rewardable material.
Level 1	1–3	Identification of generic evaluative comments. No supporting evidence/reference to context. No evidence of a logical chain of reasoning.
Level 2	4–6	Evidence of evaluation of alternative approaches. Some supporting evidence/reference to context. Evaluation is supported by a partially-developed chain of reasoning.
Level 3	7–8	Evaluation recognises different viewpoints and/or is critical of the evidence, leading to an informed judgement. Appropriate reference to evidence/context. Evaluation is supported by a logical chain of reasoning.

Q29.

Question	With reference to Extract A, examine the impact of an increase in car sales in the USA on the profits of Stellantis. Illustrate your answer with an appropriate diagram. **Answer**	**Mark**
	Knowledge 2 Application 2 Analysis 2 Evaluation 2 **Quantitative skills assessed:** **QS4**: Construct and interpret a range of standard graphical forms **QS9**: Interpret, apply and analyse information in written, graphical, tabular and numerical forms.  	**(8)**

Knowledge

Up to 2 marks for drawing a diagram that shows knowledge of:

- Original AR, MR, AC, MC with profit maximising output **(1)**
- Outward shift of AR to AR_1 and MR to MR_1 **(1)**

Analysis

Up to 2 marks for the impact of the merger on the new firms profits e.g.:

- Original supernormal profit A B AC1 P1 **(1)**
- New supernormal profit C E AC2 P1 **(1)**
- The increase in revenue increases supernormal profit **(1)**

Application

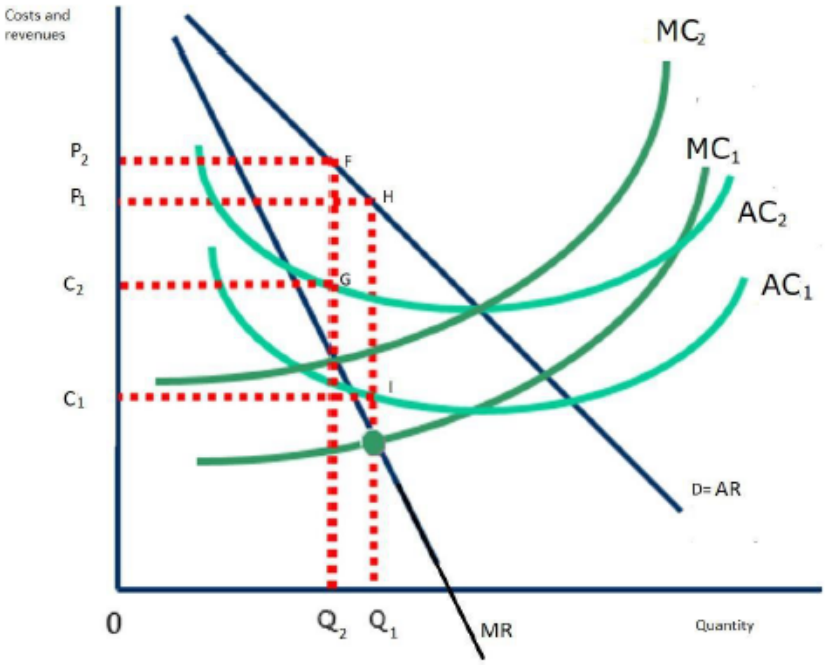
- Following the merger/in Q1 2021 Stellantis experienced a 25% increase in revenue **(1)**
- PSA Group will gain access to Fiat Chrysler 3 000 car showrooms **(1)**

Evaluation

Up to 2 marks for evaluative comments, e.g.:

- Growing into new markets may be difficult to manage causing diseconomies of scale **(1)** increasing costs and reducing profits **(1)**
- Car sales growth may help achieve economies of scale (1) helping increase profits further (1)
- The USA is only one of a number of markets for Stellantis **(1)** so profit levels could be impacted from other markets **(1)**
- Changes in costs may impact the profit levels **(1)**
- The increases in car sales may be temporary **(1)**

Q30.

Question	With reference to Extract B, examine the impact of rising energy costs on the profits of a garment manufacturer in Bangladesh. Illustrate your answer with an appropriate diagram.	Mark
	Knowledge 2 Application 2 Analysis 2 Evaluation 2 **Quantitative skills assessed:** **QS4**: Construct and interpret a range of standard graphical forms **QS9**: Interpret, apply and analyse information in written, graphical, tabular and numerical forms.  	**(8)**

	Knowledge Up to 2 marks for drawing a diagram that shows knowledge of: • Original equilibrium price and output: Q_1P_1 **(1)** • Increase in costs showing upward shift from MC_1 to MC_2 and AC_1 to AC_2 **(1)** **Analysis** Up to 2 marks for illustrating or explaining the impact of the increase in costs on the profits of a garment manufacturer on diagram e.g.**:** • Fall in supernormal profits **(1)** from HIC_1P_1 to FGC_2P_2 **(1)** **Application** Up to 2 marks for reference to Extract B • 50% increase in energy costs **(1)** • Garment manufacturers are having to claim subsidies from the government Bangladesh **(1)** • Energy costs are a variable cost for garment manufacturers **(1)**	

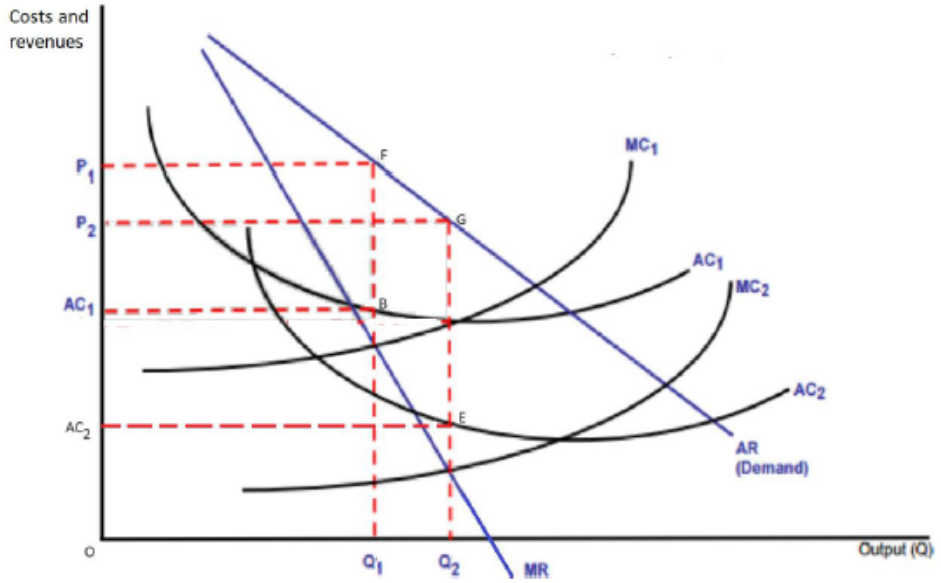
	Evaluation Up to 2 marks for evaluative comments (1+1 or 2+0) e.g.: • The Government of Bangladesh is providing subsidies to SMEs **(1)** which may limit the negative impact on profit **(1)** • Rising energy prices may not continue in the long-run **(1)** helping profits to recover in the long-run **(1)** • The 50% rise in energy costs is very significant **(1)** causing a substantial reduction in profit **(1)** • Significance of energy as a proportion of total costs **(1)** will determine the size of the shift in MC and AC **(1)** • Government subsidies may reduce costs **(1)** so there would be less impact on the profit of a garment manufacturing business **(1)** • Recent high rates of inflation may allow garment firms to also raise their prices **(1),** so the increased energy costs may not have such an impact on profits**(1)** • Some firms will leave the market so others will survive in the long run **(1)**	

Q31.

Question	With reference to Figure 1 and Extract A, examine the impact of the increase in the wholesale price of natural gas on the cost of production for UK gas suppliers.	**Mark**
	Knowledge 2 Application 2 Analysis 2 Evaluation 2 **Quantitative skills assessed:** **QS9**: Interpret, apply and analyse information in written, graphical, tabular and numerical forms. **Knowledge** Up to 2 marks for knowledge of the impact on suppliers' costs.: • Identification of natural gas as variable costs **(1)** • Variable costs are a cost that varies with the level of output **(1)** • Total costs are variable costs plus fixed costs **(1)** • Increase in costs/total costs **(1)** **Analysis** • Up to 2 marks for expansion of impact on suppliers' costs**:**An increase in variable causes an increases in marginal cost **(1)** • Increase in marginal costs increases in average total cost **(1)** • Credit for relevant diagram **(1+1)**	

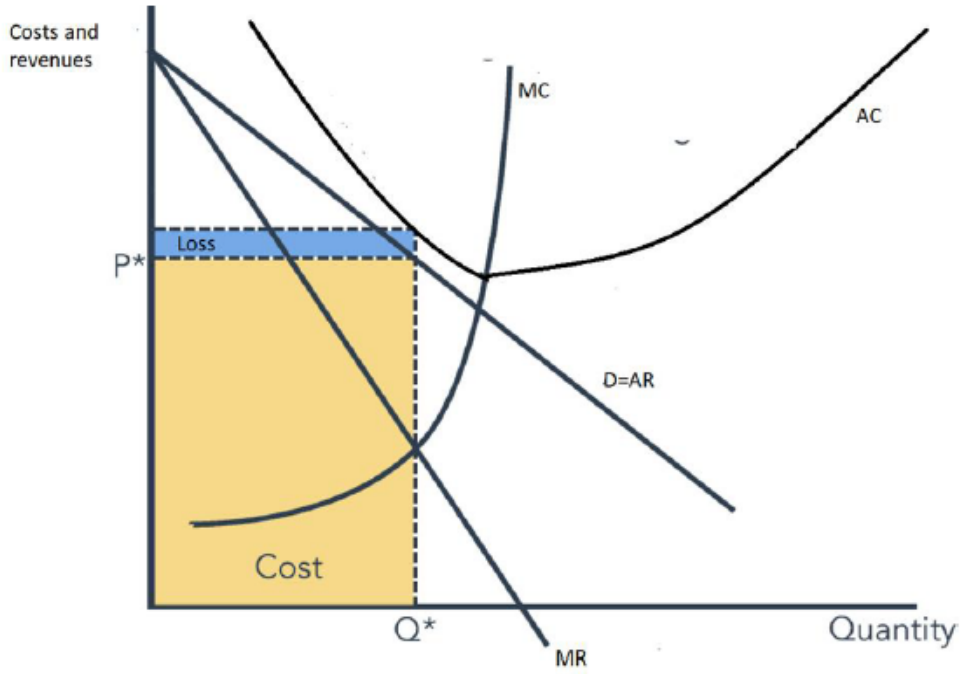
	Application **Up to 2 marks for relevant application from Figure 1 and extract 1 e.g.:** • Purchasing natural gas accounts for approximately 35% of the total costs for large gas suppliers **(1)** • This increase in the wholesale price made it impossible for 31 smaller suppliers to cover their costs **(1)** • Wholesale price increased e.g. from 47p to 280p per therm / 495.74% **(1)** • Companies have to purchase gas at world market prices **(1)** **Evaluation** **Up to 2 marks for evaluative comments (1+1) or (2+0), e.g.:** • Significance of the rise in wholesale price – 496% **(1)** • Purchasing natural gas accounts for a significant proportion of the total costs for large suppliers **(1)** even more significant for small suppliers as 31 left the market **(1)** • Suppliers may have offset the rise in the wholesale price by decreasing other costs of production **(1)** • In the long-run, the impact of the rise in cost may not be as significant **(1)** as prices fell during March 2022 **(1)** • Depends on the timing of the impact on costs of production **(1)**	**(8)**

Q32.

Question	With reference to Extract B, examine the likely impact of a reduction in Uniqlo's costs of production on its total profits. Illustrate your answer with an appropriate diagram. **Answer**	Mark
	Knowledge 2 Application 2 Analysis 2 Evaluation 2 **Quantitative skills assessed:** **QS4**: Construct and interpret a range of standard graphical forms **QS9**: Interpret, apply and analyse information in written, graphical, tabular and numerical forms.  **Knowledge** **Up to 2 marks for drawing a diagram that shows knowledge of:** • Original AR, MR, AC_1, MC_1 and profit maximisation equilibrium **(1)** • Original supernormal profit area $FBAC_1P_1$ **(1)** **Analysis** **A diagram that shows knowledge of:** • Decrease in variable cost would cause downward shift in MC **and** AC curves to MC_2 and AC_2 **(1)** • New higher quantity, lower price and increased supernormal profit identified $GEAC_2P_2$ **(1)** **Application** **Up to 2 marks for application to Extract B:** • Uniqlo hopes to negotiate favourable deals with suppliers of cotton and dyes **(1)** • Uniqlo will invest in technology and automation to replace workers **(1)**	**(8)**

	Evaluation **Up to 2 marks for evaluative comments (1+1 or 2 + 0), e.g.:** • To attract highly skilled labour Uniqlo has had to increase wages by 40% **(1)** This will increase MC and AC reducing profits **(1)** • It is costly to invest in technology and automation **(1)** • Global raw material costs are rising **(1)** • Significance of cost increase **(1)** • It takes time to implement new technology **(1)**	

Q33.

Q	With reference to Figure 1 and the first paragraph of Extract B, examine two reasons why Deliveroo is making a loss. Illustrate your answer with an appropriate diagram(s). **Answer**	**Mark**
	Knowledge 2 Application 2 Analysis 2 Evaluation 2 **Quantitative skills assessed:** **QS4**: Construct and interpret a range of standard graphical forms **QS9**: Interpret, apply and analyse information in written, graphical, tabular and numerical forms.  	**(8)**

Knowledge

A diagram that shows knowledge of:

- Downward sloping AR and MR **(1)**
- MC=MR and loss-minimising equilibrium **(1)**

Analysis

A diagram that shows knowledge of:

- Area of loss identified **(1)**
- AC above AR **(1)**

Application

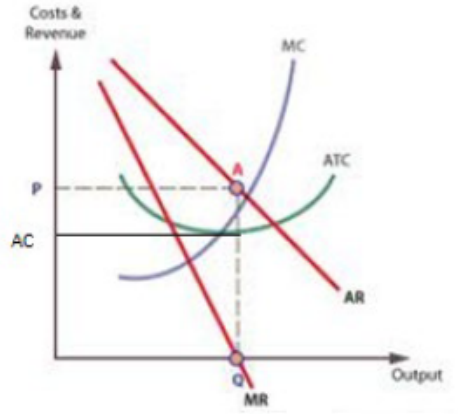
- Loss of £298m **(1)**
- Revenue was increasing but at a slower rate than the costs of production **(1)**
- loss rose by £99m/ Loss rose from £199m **(1)** to £298m **(1)**/ Loss rose by 49.7% **(1+1)**
- Increase costs of production **(1)**
- Fuel costs have increased **(1)**
- In 2021 Deliveroo made a loss of £298 million **(1)**
- Marketing costs and fixed costs increased from £358.5 million in 2020 to £628.7 million in 2021 **(1)**
- High rates of inflation across Europe **(1)**
- For calculation of total costs in 2020 (£1386m) and 2021 (£2122m) **(1+1)**

Evaluation

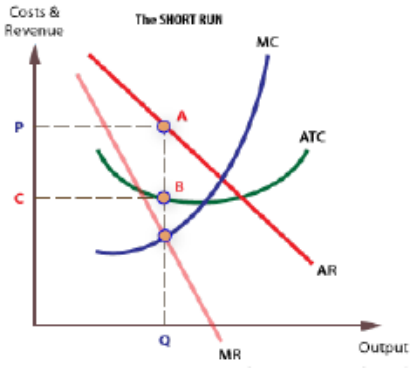
Up to 2 marks for evaluative comments (1+1 or 2 + 0), e.g.:

- The cost increase may only be in the short-run and profits may increase in the long-run **(1)** once the market has matured **(1)**/ marketing expenditure begins to fall **(1)**
- Revenue is still increasing and may increase further if real wages have risen **(1)**
- Deliveroo may reduce their costs by shutting down less profitable parts of their business **(1)** This would reduce costs and may increase profits **(1)**
- Price of fuel /rates of inflation may fall in the future **(1)**
- Significance of cost increase **(1)**

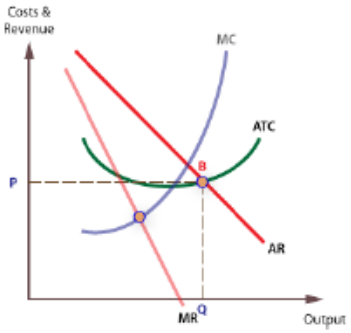
Q34.

Question Number	Indicative content
	Indicative content guidance Answers must be credited by using the level descriptors (below) in line with the general marking guidance. The indicative content below exemplifies some of the points that candidates may make but this does not imply that any of these must be included. Other relevant points must also be credited. **QS4**: Construct and interpret a range of standard graphical forms. **QS9:** Interpret, apply and analyse information in written, graphical, tabular and numerical forms. **Knowledge, Application and Analysis (12 marks) – indicative content** Range of business objectives include: • profit maximisation • revenue maximisation • sales maximisation • profit satisficing will impact on profits • social objectives • growth • If maximising revenue is the main objective, output is where MR=0 and TR is maximised. The firm in the diagram is making a supernormal profit (AR exceeds AC), but profit is less than at profit maximising output. 

- Profit maximisation objective where MC = MR (Accept perfect competition or monopoly diagram). Firm makes highest possible supernormal profit.



- If the firm's objective is sales maximisation this will be where AC=AR or TR=TC. In this case profit is lower but the firm is selling a higher quantity of goods. It is prioritising sales volume/market share over profit



- Some private sector organisations are non-profit making (eg charities), others may prioritise social responsibility eg co-operatives. Therefore profits are likely to be lower or non-existent

- **Restrict to a maximum of 9 marks for Knowledge, Application and Analysis if no diagram provided.**

Level	Mark	Descriptor
	0	No rewardable material.
Level 1	1–3	Displays isolated, superficial or imprecise knowledge and understanding of economic terms, principles, concepts, theories and models. Use of generic material or irrelevant information or inappropriate examples. Descriptive approach which has no chains of reasoning.
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	Evaluation (8 marks) – indicative content • For public sector organisations which can be financed through tax revenues, a profit objective may be non-existent or less important eg health, education, transport, postal services • There may be conflicting objectives in a large private sector organisation where there is a divorce of ownership and control. Eg shareholders want higher profits, managers want sales maximisation • Business objectives can change depending on circumstances - macroeconomic conditions (eg in a recession survival will be a prime objective) - changes within a market (eg more competitive conditions may involve sacrificing some profit in the short-run) - new government legislation (eg tightening up on environmental laws may emphasise social responsibility) - short-run & long-run distinction. Eg a business may seek to maximise revenue in the short-run aiming to remove competitors. This may then enable to business to raise prices and hence profits in the long-run

Level	Mark	Descriptor
	0	No evaluative comments.
Level 1	1–3	Identification of generic evaluative comments. No supporting evidence/reference to context. No evidence of a logical chain of reasoning.
Level 2	4–6	Evidence of evaluation of alternative approaches. Some supporting evidence/reference to context. Evaluation is supported by a partially-developed chain of reasoning.
Level 3	7–8	Evaluation recognises different viewpoints and/or is critical of the evidence, leading to an informed judgement. Appropriate reference to evidence/context. Evaluation is supported by a logical chain of reasoning.

Q35.

Question	Quantitative skills assessed	Answer	Mark
	QS6: Calculate cost, revenue and profit (marginal, average, totals)	**The only correct answer is A** B is incorrect because this is the average fixed cost C is incorrect because this is the average total cost D is incorrect because this is the average revenue	**(1)**

Q36.

Question	Quantitative skills assessed	Answer	Mark
	QS6: Calculate cost, revenue and profit (marginal, average, totals) **QS9: Interpret, apply and analyse information in written, graphical, tabular and numerical forms.**	**The only correct answer is B** A is incorrect because this is the MR at $12 C is incorrect because this is the average revenue at $12 D is incorrect because this is the average revenue at $14	**(1)**

Q37.

Question Number	Quantitative skills assessed	Answer	Mark
		The only correct answer is C **A** *is not correct because this will affect the supply of labour* **B** *is not correct as this will affect the supply of labour* **D** *is not correct because will affect the supply of labour*	**(1)**

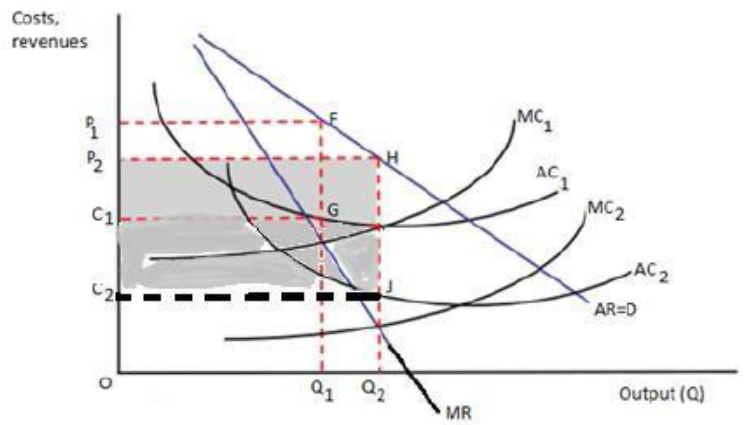
Q38.

Question	Quantitative skills assessed	Answer	Mark
	QS6: Calculate cost, revenue and profit (marginal, average, totals) **QS9:** Interpret, apply and analyse information in written, graphical, tabular and numerical forms.	**The only correct answer is B** **A** is incorrect because this is the marginal cost of increasing the number of haircuts from 3 to 4 **C** is incorrect because this is the average variable cost of 3 haircuts **D** is incorrect because this is the average fixed cost of 4 haircuts	**(1)**

Q39.

Question	Quantitative skills assessed	Answer	Mark
	QS9: Interpret, apply and analyse information in written, graphical, tabular and numerical forms.	B	**(1)**

Q40.

Question	With reference to the first two paragraphs of Extract B, examine the impact of Tesla producing its electric vehicles in China on its costs and profits. Illustrate your answer with a costs and revenues diagram. **Answer**	Mark
	Knowledge 2 Application 2 Analysis 2 Evaluation 2 **Quantitative skills assessed:** **QS4**: Construct and interpret a range of standard graphical forms **QS9**: Interpret, apply and analyse information in written, graphical, tabular and numerical forms. Decreasing costs  	

Knowledge

Up to 2 marks for drawing a diagram that shows knowledge of:

- Original AR, MR, AC1, MC1 and profit-maximising equilibrium **(1)**
- Original supernormal profit area P1FGC1 **(1)**

Analysis

Up to 2 marks for linked explanation of impact on Tesla's profits e.g.**:**

- Decrease in AC causes a downward shift in MC and AC curves to MC2 and AC2 **(1)**
- Area of new supernormal profit identified P_2HJC_2 **(1)**

Application

Up to two marks for reference to Extract B:

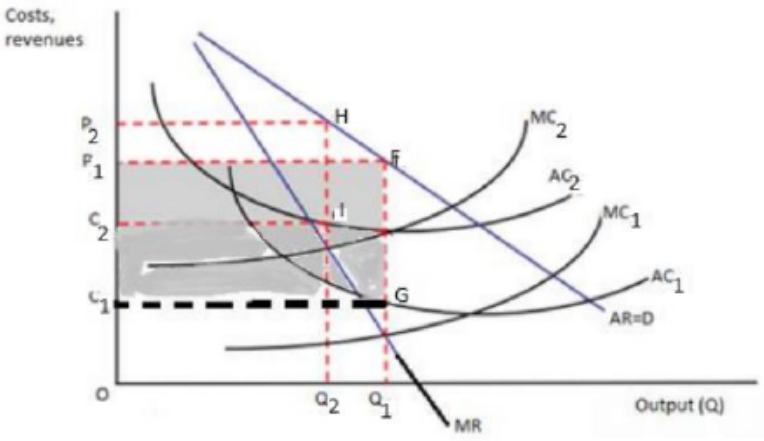
- Tesla was able to take advantage of government subsidies aimed at promoting the domestic electric vehicle industry lowering their costs **(1)** Tesla benefited from low-cost labour **(1)**
- China has become a key manufacturing centre for Tesla, with the Shanghai factory producing over 710 000 vehicles in 2022 **(1)**
- Tesla improved its efficiency from producing in Shanghai **(1)**

Evaluation

Up to 2 marks for evaluative comments, e.g.:

- Costs may have risen **(1)** as production has been difficult in China/ Tesla faced supply chain disruptions due to the global health crisis/ Tesla's costs of production have risen/Tesla had to pay taxes on imported components and finished vehicles **(1)**
- When the subsidies end costs will rise again reducing profit **(1+1)**
- As averages incomes in China rise the wages will rise reducing the costs advantages **(1+1)**

Increasing costs



	Knowledge Up to 2 marks for drawing a diagram that shows knowledge of: • Original AR, MR, AC_1, MC_1 and profit-maximising equilibrium **(1)** • Original profit area P_1FGC_1 **(1)** **Analysis** Up to 2 marks for linked explanation of impact on Tesla's profits e.g.: • Increase in MC and AC causes an upward shift in MC and AC curves to MC_2 and AC_2 **(1)** • Area of new supernormal profit P_2HIC_2 **(1)** **Application** Up to 2 marks for application to Extract B • Production has been difficult in China **(1)** • Tesla faced supply chain disruptions due to the global health crisis **(1)** • Tesla's costs of production have risen **(1)** • Tesla had to pay taxes on imported components and finished vehicles **(1)** **Evaluation** • Costs may in fact have fallen **(1)** as Tesla was able to take advantage of government subsidies aimed at promoting the domestic electric vehicle industry lowering their costs /Tesla benefited from low-cost labour/ China has become a key manufacturing centre for Tesla, with the Shanghai factory producing over 710 000 vehicles in 2022/ Tesla improved its efficiency from producing in Shanghai **(1)** • Depends on the proportion of total costs labour makes up if it is capital intensive it will be less important **(1+1)** • In the long run the supply chain problems will reduce helping to lower costs and increasing profits **(1+1)**	**(8)**