Pearson Edexcel

Mark Scheme (Results)

October 2022

Pearson Edexcel International Advanced Level
In Economics (WEC13) Paper 01
Unit 3: Business behaviour

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General Marking Guidance

- All candidates must receive the same treatment. Examiners must mark the first candidate in exactly the same way as they mark the last.
- Mark schemes should be applied positively. Candidates must be rewarded for what they have shown they can do rather than penalised for omissions.
- Examiners should mark according to the mark scheme not according to their perception of where the grade boundaries may lie.
- There is no ceiling on achievement. All marks on the mark scheme should be used appropriately.
- All the marks on the mark scheme are designed to be awarded. Examiners should always award full marks if deserved, i.e. if the answer matches the mark scheme. Examiners should also be prepared to award zero marks if the candidate's response is not worthy of credit according to the mark scheme.
- Where some judgement is required, mark schemes will provide the principles by which marks will be awarded and exemplification may be limited.
- When examiners are in doubt regarding the application of the mark scheme to a candidate's response, the team leader must be consulted.
- Crossed out work should be marked UNLESS the candidate has replaced it with an alternative response.

Section A

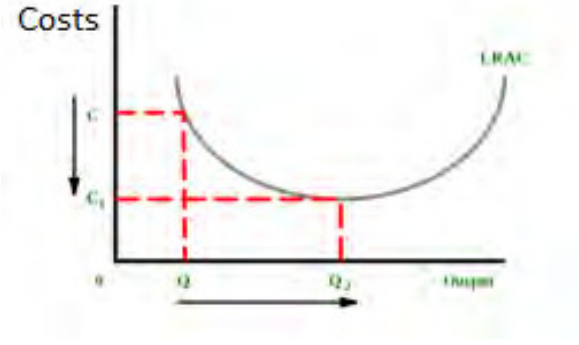
Question	Quantitative skills assessed	Answer	Mark
1		**The only correct answer is A** B is incorrect constant returns to scale should not stop entry into the market C is incorrect because low advertising costs should make it easier for firms to compete in the market D is incorrect because high supernormal profits should encourage new firms to enter	**(1)**
2	**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 the firm is not producing at the productively efficient level B is incorrect because price is equal to MC D is incorrect because firms make normal profit in the long-run	**(1)**
3		**The only correct answer is A** B is incorrect as this would cause more available labour to enter the country B is incorrect as incentives to work would increase D is incorrect as this would not affect the supply of labour	**(1)**
4	**QS6: Calculate cost, revenue and profit (marginal, average, totals)** **QS9: Interpret, apply and analyse information in written,**	**The only correct answer is C**	**(1)**

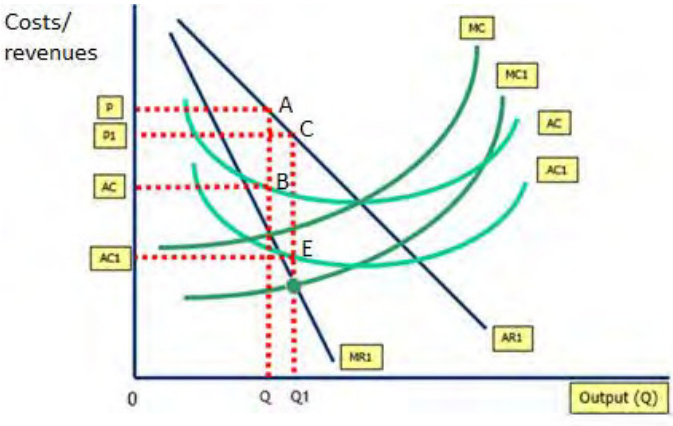
	graphical, tabular and numerical forms.	A is incorrect because this is the difference in the wage rates B is incorrect because this is the additional $20 paid for 41 workers D is incorrect because this is the total cost of wages	
5	**QS4: Construct and interpret a range of standard graphical forms** **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)**
6	**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 this occurs where MR=0 C is incorrect because this occurs where MC=MR D is incorrect because this occurs between profit maximisation and sales volume maximisation	**(1)**

Section B

Question	With reference to Figure 1, calculate the percentage point change in the four-firm concentration ratio between 2020 and 2021. **Answer**	**Mark**
7(a)	**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. 1 mark for calculation in 2020: 26+11+20+15 = 72% OR 1 mark for calculation in 2021: 21+17+16+13 = 67% 1 mark for the change in CR: 67% - 72% = -5 **NB: Award full marks for correct answer (-5) regardless of working.** **NB: Accept 5 without minus sign**	**(2)**

Question	With reference to Extract A, analyse **two** reasons why India has become the world's second largest smartphone market. **Answer**	Mark
7(b)	**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 marks for identifying two reasons and 1 mark for each linked expansion e.g.** • Large population **(1K)** means high potential sales in India **(1An)** • Increasing per capita real incomes/disposable incomes **(1K)** mean smartphones are more affordable for consumers **(1An)** • Large smartphone ownership **(1K)** shows potential for upgrading to the latest models **(1An)** **Application** **Up to 2 marks for identifying two relevant applications from extract A e.g. (1+1)** • per capita income rose from US$1000 to US$1301 **(1)** • over half the population owns a mobile phone/it is expected that the market will grow from US$ 25.1 billion in 2018-2019 to US$ 80 billion in 2025-26 **(1)** in 2021 India's population was 1.38 billion/India has the second largest population after China **(1)**	**(6)**

Question	With reference to Extract B, explain what is meant by 'economies of scale '. **Answer**	Mark
7(c)	**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)**

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
7(d)	**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)**

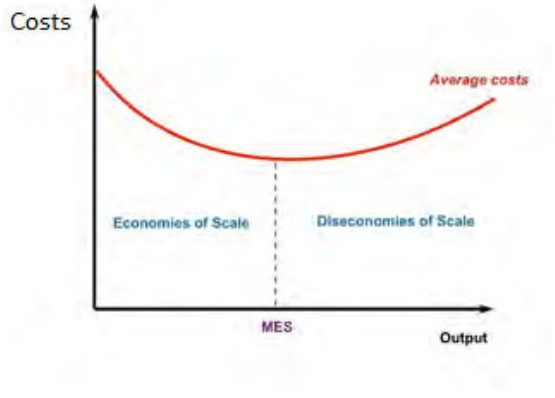
Question	With reference to Extract C, Figure 2 and your own knowledge, discuss the benefits of non-price competition for consumers and businesses in the Indian smartphone industry. **Indicative content**
7(e)	**Indicative content guidance** Answers must be credited by using the level descriptors (below) 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** • Non-price competition occurs when firms use such factors as packaging, delivery, or customer service rather than price to increase demand for their products. • The Indian mobile phone industry is an oligopoly with the combined market share of the top 4 at 67% in 2021. Therefore they are unlikely to compete on price **Benefits to consumers:** • Better quality goods: Businesses are competing through innovation and design. This enables consumers to benefit from more choice/better quality goods, improving consumer welfare • Increased awareness through advertising. This enables consumers to make informed/rational decisions/maximising utility • Branding: this enables consumers to recognise the smartphones produced by each manufacturer • After-sales service: this enables consumers to resolve problems when using smartphones • New products may be developed through non-price competition allowing consumers to benefit from a greater range of smartphones with better technology **Benefits for businesses:** • Higher profits: non-price competition makes demand more price inelastic because of the better quality products. Businesses can charge higher prices and increase their profits • Avoids costly price wars • Better branding/customer loyalty as businesses are able to differentiate themselves from other smartphone producers. This can help businesses increase their sales and market share • Product differentiation through non-price competition helps these businesses to set their own prices **NB Level 3 response requires benefits to both business and consumers**

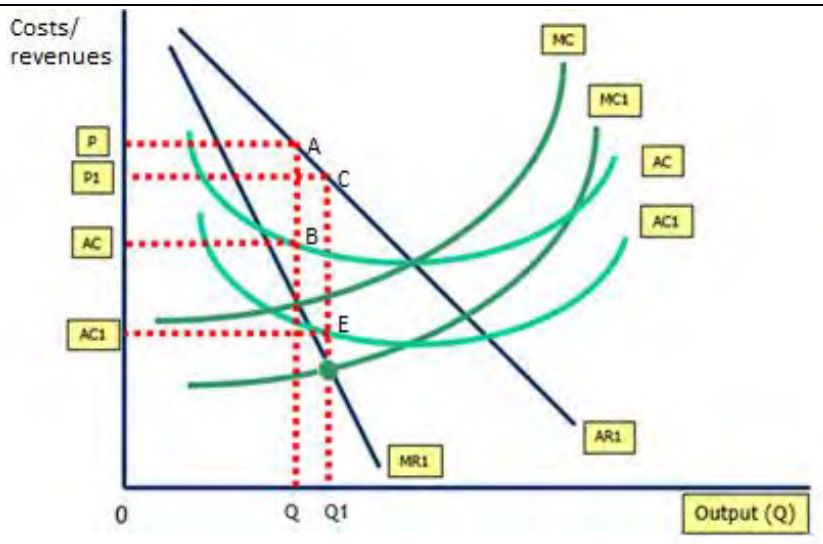
Level	Mark	Descriptor
	0	No rewardable material.
Level 1	1–3	Displays isolated, superficial or imprecise knowledge and understanding of economic terms, principles, concepts, theories and models. Use of generic material or irrelevant information or inappropriate examples. Descriptive approach which has 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 **Consumers:** • Non-price competition may lead to higher prices for consumers as businesses will need to cover their innovation costs, reducing consumer surplus • Consumers would most likely benefit from lower prices in a price war/price competition • Non-price competition increases the complexity of the purchase • Non-price competition acts as a barrier to entry reducing choice **Businesses:** • Non-price competition can be expensive. Businesses investing in new technology and innovation will increase their costs of production which may cause profits to fall • Investing in innovation and technology can be risky and takes a long time. If unsuccessful, businesses may face increased costs and be unable to recover them with higher sales • Smaller firms may not be able to operate in this market as non-price competition acts as a barrier to entry for them • Non-price competition could contribute to allocative inefficiency as prices rise

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.

Section C

Question	Evaluate the possible benefits of a demerger. Illustrate your answer with an appropriate diagram(s). **Indicative content**
8	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. • Definition of demerger – separation of a firm into two or more businesses Possible benefits include: • Lower LRAC as the business was previously experiencing diseconomies of scale  • By demerging, Peak Minerals is able to lower output reducing diseconomies of scale and moving closer to its MES • The business becomes more efficient – less x-inefficiency in the company as Peak Minerals are able to focus on the core strengths of the business, such as copper, reducing costs • Expected synergies between Peak Minerals and Vertex Minerals did not occur - hence the firm may reduce its LRAC



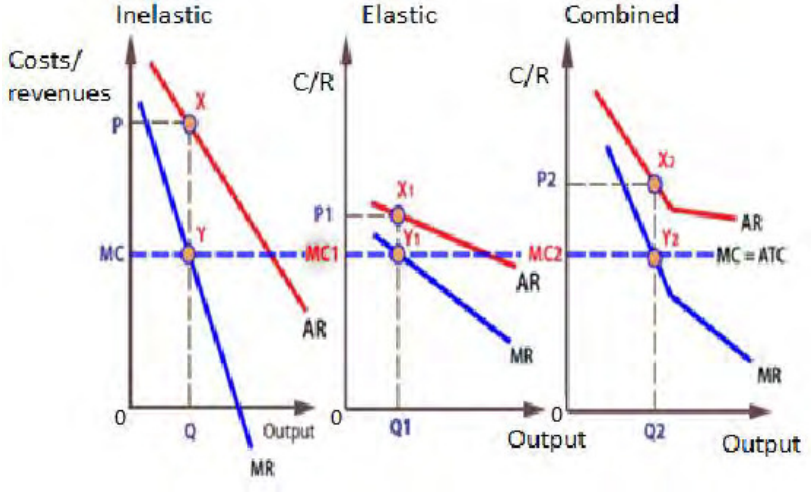
- Increase in profits (or a reduction in losses) as a result of lower MC and AC as communication/management improves. Changing the equilibrium position from Q to Q1 increasing supernormal profits from A,B,AC,P to C,E,AC1,P1
- The business has sold off parts which were higher risk – for example Vertex may not have been profitable, or in a high-risk market
- The firm may avoid intervention from competition authorities as it was becoming too dominant in the minerals market
- Shareholders may benefit if the company becomes more profitable in the future
- Workers may benefit from higher wages if the business has reduced its costs
- Consumers may benefit from lower prices

NB if no diagram candidate can achieve a maximum of level 3

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 • The business may regret decision e.g. if the demerged firm performs badly under new ownership and/or was undervalued at time of sale • The business may experience a rise in LRAC and a reduction in economies of scale if the size of business is now below MES • The breaking up of the vertical integration may result in higher costs because of greater competition for resources • The cost of the demerger may outweigh the potential benefits e.g. legal fees, disputes between parties when breaking up, possible redundancy costs, new IT systems required etc. • If the demerged business is unprofitable then workers may lose their jobs • If the demerged business is unprofitable then consumers may face higher prices • If the demerged business is unprofitable then shareholders may face a fall in value of their shares and lower dividends • Consumers have to deal with more separate firms rather than one offering everything, causing more time and complexity in decision making

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.

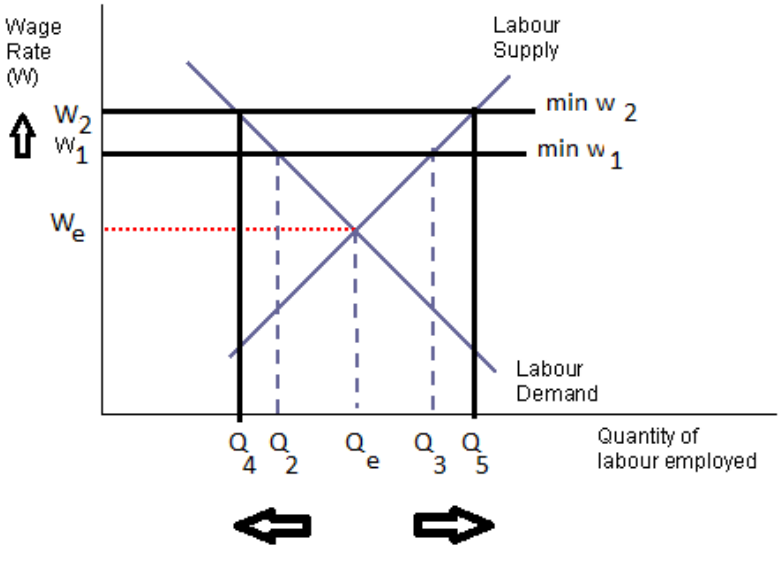
Question	Evaluate the possible benefits of price discrimination to both the business and consumers. Illustrate your answer with an appropriate diagram(s). **Indicative content**
9	Indicative content guidance Answers must be credited by using the level descriptors (below) in line with the general marking 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. • Definition of price discrimination – where a firm is charging different prices to different users for the same product/service • Conditions necessary for Price Discrimination: - monopoly power - PEDs must be different in each sub-market - it must be possible for the business to be able to keep the sub-markets separate, so that there is no switching between sub-markets  Output OQ and high price OP where demand is price inelastic Output OQ1 and lower price of OP1 where demand is price elastic Higher total profit when compared with combined market **Possible benefits to the business** • Charging higher prices to those consumers whose demand is relatively inelastic and lower prices to those consumers whose demand is relatively elastic . Increases revenue for the business

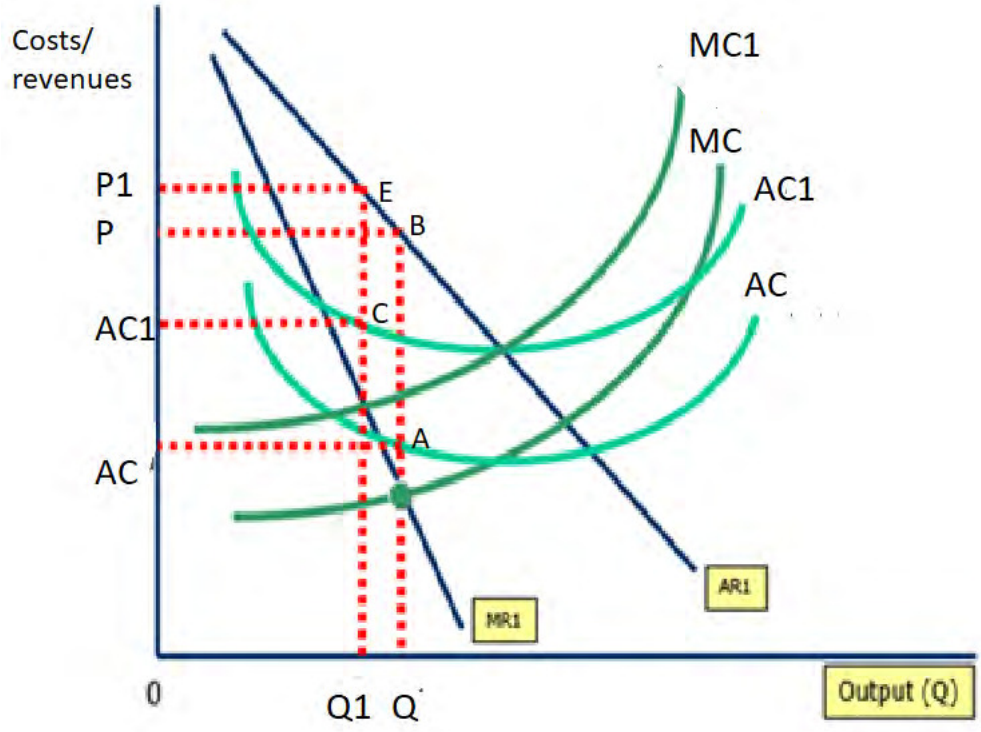
	• Extraction of consumer surplus to increase producer surplus benefits the business as profits rise • Selling to a larger market increases revenue for the business • The business may be able to use resources more efficiently, such as increasing use of space during off-peak times (e.g. hotels, train companies and restaurants) • The business may be able to use resources more efficiently, such as increasing use of space during off-peak times (e.g. hotels, train companies and restaurants) **Possible benefits to consumers** • Consumers in the sub-market in which demand is price elastic will benefit from lower prices and higher consumer surplus e.g. low-income groups • This may result in more options e.g. staying in different cities or resorts • Higher profits may encourage further investment by firms which can improve quality and possibly lower prices due to effects of dynamic efficiency • Without price discrimination, the business may make losses and exit the industry reducing consumer choice Cross-subsidisation of different business activities to avoid losses means some consumers are able to purchase the good/service • Improved quality of service for price-inelastic consumers (less crowding on peak services) **NB if no diagram candidate can achieve a maximum of level 3** **NB Level 4 response requires benefits to both business and consumers**

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 **The business:** • Higher revenue/profits depend on the extent to which the firm can maintain the conditions necessary for price discrimination • May only apply in the short-run. If a new business enters the market because of the supernormal profit being made, price discrimination may not be possible • If costs of separating the sub-markets are high then the extra revenue gained may be limited • If the impacts are judged to be anticompetitive, there are regulatory bodies in place, then the business may be fined • Damage to reputation of business **Consumers:** • Consumers with inelastic demand will be paying higher prices resulting in a loss of consumer surplus • A significant number of different prices can be confusing and potentially costly for consumers • Price discrimination may make it more difficult for consumers to make rational choices

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.

Question	Evaluate the likely microeconomic effects of an increase in the national minimum wage on an industry of your choice. Illustrate your answer with an appropriate diagram(s). **Indicative content**
10	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. • National minimum wage is a price floor below which the wage rate cannot fall/the lowest amount businesses are allowed to pay per month/per hour  • An increase in the national minimum wage would cause the equilibrium wage rate for restaurant workers to increase from W_1 to W_2 and the level of employment in this market to fall from Q_2 to Q_4 • Unemployment may increase in the restaurant industry from Q_2Q_3 to Q_4Q_5 as firms cannot afford to employ the same amount of labour • Unemployment will rise as more individuals enter the labour market, incentivised by the higher wage rate, but cannot find employment



- Profits may fall for restaurants from A,B,P,AC to C,E,P1,AC1, as labour costs have risen causing AC to rise to AC1 and MC to rise to MC1,
- Businesses may make a loss as restaurants may be labour intensive
- Businesses may face a significant increase in costs and may have to reduce other costs e.g. costs of materials, reducing quality
- Businesses may need to increase prices reducing consumer surplus
- An increase in the informal sector, as businesses try to avoid paying higher wages to workers

NB if no diagram candidate can achieve a maximum of level 3

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	Evaluation (8 marks) – indicative content • Higher wages may improve productivity, reducing production costs and increasing profits • Many workers are paid above the NMW, therefore the rise will not have an impact on them • Higher wages would increase standards of living • If the proportion of costs allocated to wages is low, businesses may absorb the extra cost and unemployment may not rise • It depends on how labour-intensive the industry is. For more labour-intensive industries, the impact will be more significant • If the labour is derived demand the national minimum wage may not significantly impact the demand for labour • It will depend on the PED of labour as to the size of the impact

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