GCE

Economics

Mark Scheme for June 2012

Annotations

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

OCR (Oxford Cambridge and RSA Examinations)
1 Hills Road
Cambridge
CB1 2EU

OCR Customer Contact Centre

Education and Learning
Telephone: 01223 553998
Facsimile: 01223 552627
Email: general.qualifications@ocr.org.uk

www.ocr.org.uk

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