



GCE

Economics

Advanced GCE

Unit **F584**: Transport Economics

Mark Scheme for January 2012

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Annotations

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

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Subject-specific Marking Instructions

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



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

- Level 4(b):** Complex ideas have been expressed clearly and fluently using a style of writing which is appropriate to the complex subject matter. Sentences and paragraphs, consistently relevant, have been well structured, using appropriate technical terminology. There may be few, if any, errors of spelling, punctuation and grammar.
- Level 3:** Relatively straightforward ideas have been expressed with some clarity and fluency. Arguments are generally relevant, though may stray from the point of the question. There will be some errors of spelling, punctuation and grammar, but these are unlikely to be intrusive or obscure meaning.
- Level 2:** Some simple ideas have been expressed in an appropriate context. There are likely to be some errors of spelling, punctuation and grammar of which some may be noticeable and intrusive.
- Level 1:** Some simple ideas have been expressed. There will be some errors of spelling, punctuation and grammar.

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Question			Answer	Marks	Guidance
1	(a)	(i)	<p>Up to two marks:</p> <p>1 mark for stating that the number of rail passenger journeys increases.</p> <p>1 mark for stating that it has increased <u>at a slower rate.</u></p> <p>1 mark only for GENERAL comment eg “fall in growth” as more needed</p>	2	<p>Please indicate each mark using </p> <p>No marks for incorrect reference to the fact that numbers have fallen.</p>
		(ii)	<p>Up to two marks are available for identifying any relevant factor which may explain these trends (note: apply OFR here so even if the answer to a(i) is incorrect they can gain full marks on part of the question).</p> <p>2 marks are available for correct identification of factors including:</p> <ul style="list-style-type: none"> • Economic slowdown/recession OR changes in disposable incomes (NOTE: GDP/household income all one factor) • Changes in employment levels (accept as separate to GDP) • Changes in rail fares/prices • Changes in price of complements (eg car parking at train stations) • Changes in the price of substitute modes of transport • Possible changes in service quality • Reliability issues and punctuality • Changes in journey times • Increased population • General changes in tastes and fashion with train travel seen as more desirable (accept reference to environmental concerns). <p>A further two marks are available for relevant development: There must be clear explanation of the consequence of the factor (eg modal switch/lower demand occurs due to higher rail fares).</p> <p>Reward use of economic terminology (for example, development of increased incomes MAY take the form of an accurate application of positive income elasticity of demand).</p>	4	<p>Please indicate each correct factor with  and then use a further tick where relevant explanation is being rewarded.</p> <p>Accept any factor explaining EITHER a rise in train use OR a decline.</p> <p><u>Only accept the same explanation once.</u></p> <p>The development mark should only be rewarded where the explanation is clear eg: “A change in tastes and fashion have occurred (1) resulting in people switching towards train and away from buses as the train is seen as a more reliable, better quality substitute (1)”</p> <p>“changes in prices of substitutes (1) mean that people switch to cheaper mode of transport (1)”</p> <p>“higher incomes (1) result in higher demand for trains as they are now more affordable (1)”</p>

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Question		Answer	Marks	Guidance
	(b) (i)	<p>2 marks for a clear definition such as: A benefit gained by (OR a positive impact upon) a third party Where social benefit exceeds private benefit A positive spillover effect. A benefit to someone outside the transaction OR outside decision making</p> <p>1 mark for a basic definition such as: A benefit to someone else (no clear economics) Where one person's actions have a positive/beneficial impact upon others.</p>	2	<p>DO NOT reward simple reference to the fact that it is an external benefit.</p> <p>NOTE: NO MARKS for examples NO MARKS for SB>SC</p> <p>1 mark only for "effect on 3rd party"</p>
	(ii)	<p>1 mark for identification of any relevant <u>positive</u> externality eg:</p> <ul style="list-style-type: none"> • relocation of businesses to areas around transport infrastructure • reduced costs for local businesses due to increased speed • increased employment for workers • increased economic growth (accept growth of FDI) • local multiplier effects (accept benefit to local businesses) • quicker commuting journeys OR increased productivity • increased frequency of trains • improvements in quality of service OR a more reliable service <p>1 mark for development of why this is a positive externality eg:</p> <ul style="list-style-type: none"> • Explicit reference to it being a benefit to a third party (OR SB>PB). • Reference to the fact that this is a benefit arising to others • Benefit not included by decision makers/not included in transaction <p>DO NOT REWARD basic ref to "this is a Social Benefit" or "a benefit to society"</p>	2	<p>Please indicate each correct factor with  and then use a further tick where relevant explanation is being rewarded.</p> <p>DO NOT reward identification mark for reference to lower negative externalities (eg pollution/congestion falling NOT accepted)</p>

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Question		Answer	Marks	Guidance
	(c) (i)	<p>1 mark for relevant identification of an example <u>FOR RAIL</u> such as:</p> <ul style="list-style-type: none"> • The cost of the franchise OR cost of bidding for the franchise • The capital costs/set up costs involved (eg lease of rolling stock) • Sunk costs (such as advertising) • Legal barriers (regulations which have to be met) • Predatory and limit pricing (accept reference to intimidation) • The risk and uncertainty involved. • Brand loyalty of existing firms in the industry • Economies of Scale enjoyed by existing firms • Franchises (with time limits) • Imperfect information <p>1 mark for explanation EITHER developing the example in more detail <u>with respect to rail</u> OR explaining why this factor stops other firms <u>entering market</u></p>	2	<p>NOTE: NO MARKS for defining what a barrier to entry is</p> <p>This is a 1+1 question – please use two ticks to illustrate where the marks have been awarded.</p> <p>1 mark for stating the example 1 mark for explaining it <u>with clear reference to rail</u> OR explaining why this leads to firms not being able to enter the market</p> <p>Eg “high set up costs (1) such as rolling stock (1)” gets both marks overall.</p>

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Question	Answer	Marks	Guidance
	<p>(ii) Five marks are available in total for this question: Up to 2 marks for recognising why the market MAY be contestable:</p> <ul style="list-style-type: none"> • Legally, in theory, firms have the right to compete for franchises (in other words, certain legal barriers have been removed). <i>Accept simple reference to “legal barriers have been removed” OR “firms are able to bid/compete for franchises” OR “lower legal barriers”</i> • ‘Open Access’ operators are able to compete in the market (against franchise holding firms) eg Grand Central and Hull trains. • Accept a general comment that <u>privatisation has removed barriers to entry</u> (and hence increased contestability) • Leasing of trains has increased contestability due to lower barriers (lower start up costs) • As brand loyalty is not an issue in the train passenger market this is one barrier which does not exist—hence the market is contestable (except in the case of Open Access market) • There are a number of competing firms (a pool of potential entrants) wanting to enter the market <p>Up to 2 marks for recognising why it MAY NOT be contestable with explicit reference to examples of barriers which exist:</p> <ul style="list-style-type: none"> • high set up/start up costs (including cost of meeting health and safety laws) • economies of scale of established firms • imperfect information. • a lack of slots at many main line London stations • restrictions on where passengers can be picked up/dropped off • limited availability of rolling stock • a shortage of trained drivers for companies to employ • On some routes there is not a pool of potential entrants • Possible predatory pricing/limit pricing 	<p>5</p>	<p>This is a 2+3 question but the final evaluative mark is reserved for an evaluative conclusion or judgement being offered.</p> <p>An entirely one sided answer can therefore only gain 2 marks.</p> <p>PLEASE add a comment at the end of the answer indicating the breakdown of marks awarded eg 1+2 or if an evaluative conclusion is offered, 1+2+1</p> <p>Accept a lack of brand loyalty only as evidence of the market being contestable</p> <p>Please use  to indicate where an evaluative conclusion or judgement has been rewarded.</p>

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Question	Answer	Marks	Guidance
	<p>1 final mark is available for a clear summary, evaluative conclusion which answers the question directly. For example:</p> <ul style="list-style-type: none"> • A simple conclusion which states that it is clear that the rail industry has limited contestability OR that contestability varies over time. • Despite the high prices, as there are so few non-franchised operators in the market, the market is clearly not very contestable • The extent to which the market is contestable depends upon how far barriers have been reduced • Level of contestability will depend upon size of incumbent firms 		
(d)	<p>Up to eight marks are available in total for this question.</p> <p>Up to 3 marks are available for relevant analysis as to how rail privatisation may have been seen as being beneficial. This may include:</p> <ul style="list-style-type: none"> • The <u>benefits</u> of increased competition (eg “increased efficiency”). Accept theoretical benefits of lower fares/increased quality. • The incentive for greater private sector investment • Reduced cost to the government (no longer nationalised) • The greater incentive to innovate in the private sector • The revenue gained by the government through the privatisation process (OR <u>theoretical</u> saving from planned reductions in subsidies) • More long term planning without government interference • Some argue that private sector management would be more motivated • Accept basic references to privatisation succeeding due to increased passenger numbers on trains (and subsequent reduced externalities/reduced pollution). <p>Any one point which is clearly developed can gain up to 3 marks maximum. Alternatively, 3 separate but relevant points stated can gain 3 analysis marks.</p>	8	<p>A 3+5 question with the last two evaluative marks being awarded for an evaluative conclusion or summary.</p> <p>Please use  to indicate where an evaluative conclusion or judgement has been rewarded</p> <p>PLEASE add a comment at the end of the answer indicating the breakdown of marks awarded eg 3+2+0</p> <p>TWO APPROACHES TO QUESTION:</p> <p>a. Analysis of benefits and costs of privatisation</p> <p>b. Analysis of benefits of privatisation AND analysis of benefits of nationalisation (second approach = 6 max)</p> <p>Therefore an answer which purely looks at the benefits of nationalisation gets 3 maximum (a one sided answer).</p>

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Question	Answer	Marks	Guidance
	<p>Up to 3 marks are available for discussion of possible drawbacks:</p> <ul style="list-style-type: none"> • Increased competition has not necessarily occurred with a limited number of interested parties on some franchise routes. Hence oligopoly/duopoly analysis may be relevant • Any profits made now go to private sector shareholders rather than being put back in to the train network and re-invested • After privatisation, private sector firms can simply ignore the external benefits arising from rail use – allocative inefficiency arises as a positive externality is not internalised. • Accept references to the fact that private sector companies may well ignore external costs in pursuit of profit maximisation. • Privatisation has arguably broken up what was a natural monopoly – hence potentially losing economies of scale • Critics claim that privatisation has simply moved a public sector monopoly in to the private sector – hence economic inefficiency remains • Despite government hopes, substantial subsidies do remain in many franchise areas (notably the South-West) – hence cost to the govt. • Rail privatisation has arguably broken up what was a national network and hence there has been disintegration of a previous national network. This could be argued to have made the job of investing and finding a national solution to congestion much more difficult as it is harder for the government to co-ordinate such policies • Rail privatisation has seen an end to cross-subsidies and hence, theoretically, some branch lines may close down (network considerations) and loss of unprofitable rural routes • Due to a lack of competition, fares have increased in real terms (which have reduced consumer surplus/consumer welfare). • In practice, existing franchise holders have been able to establish economies of scale • When privatised was the true value of assets realised or were public assets sold off too cheaply? 		

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Question	Answer	Marks	Guidance
	<p>Each separate point of discussion, well developed, can gain up to 3 marks.</p> <p>2 further marks are available for a clear conclusion or evaluative judgement:</p> <p>1 mark for a basic conclusion stating whether or not rail privatisation has been beneficial or not</p> <p>2 marks for a clear evaluative conclusion suggesting what factors will determine whether or not it has been beneficial. For example:</p> <ul style="list-style-type: none"> • the extent to which barriers to entry remain • the extent to which the industry is subject to control by regulators • it depends upon which sector of the rail industry is being looked at (eg freight verses passenger?) • It depends which are of the network you are looking at (ie rural areas or urban areas) • It depends upon the level of increased competition generated as a result of privatisation 		

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Question		Answer	Marks	Content	Guidance
					Levels of response
2	(a)	<p>Candidates need to analyse the main characteristics:</p> <p>Relevant characteristics include:</p> <ul style="list-style-type: none"> • High barriers to entry (including sunk costs) • Non-price competition being used • Firms face a kinked demand curve • Price rigidity/stickiness • Interdependence amongst firms/Game theory • Collusion • Not all firms aim for profit maximisation • 'L' shaped AC curve (due to nature of AVC) <p>Relevant <u>analysis</u> of these could include:</p> <p>Oligopoly firms have high barriers to entry (L1), for example, high start-up costs OR these make it difficult for new firms to enter markets(L2). As a result, there will be fewer firms in the industry/it is dominated by a small number of firms (L3). OR that the market is more concentrated (L3)</p> <p>High barriers to entry exist (L1) such as economies of scale with dominant firms bulk buying etc (L2). This deters new firms from entering the market (L3) OR such barriers will drive new firms out of the market (L3) OR result in lower competition (L3)</p> <p>Firms face a kinked demand curve (L1). If they increase price then other firms will not follow and they will lose sales – or vice versa (L2). This results in price rigidity (L3) OR a desire not to compete on the basis of price(L3)OR collusion between firms(L3) <i>[Note: relevant analysis of kinked demand curve can be in terms of non-price competition occurs]</i></p>	15	<p>Identification of characteristics = Level 1</p> <p>Identification AND explanation of characteristics = Level 2</p> <p>Analysis of HOW each characteristic results in an oligopoly existing = Level 3</p> <p>Level 3: characteristics must be clearly analysed – <u>in other words, there must be clear development of the consequences of these characteristics</u> or how they result in an oligopoly market being formed.</p>	<p>Level 3: (9–15 marks) For a clear analysis of the characteristics of an oligopoly market</p> <p>13–15: <i>Very good analysis:</i> good analysis of two or more characteristics</p> <p>11–12: <i>Good analysis:</i> Good analysis of one characteristic OR basic analysis of two</p> <p>9–10: <i>Basic analysis:</i> basic analysis of one characteristic</p> <p>Level 2: (5–8 marks) For an application of knowledge and understanding of the characteristics of oligopoly markets:</p> <p>7–8 marks: <i>Good application:</i> 2 or more factors identified and explained.</p> <p>5–6 marks: <i>Basic application:</i> 1 factor identified and explained.</p> <p>Answers in this level will <u>identify</u> and <u>explain</u> different characteristics but fail to analyse these in terms of why it gives rise to oligopoly. In other words, such answers describe the characteristic given rather than analysing it. As soon as two or more characteristics are identified and explained then 7 – 8 marks will be rewarded.</p>

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

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Question	Answer	Marks	Guidance	
			Content	Levels of response
(b)	<p>Candidates are expected to analyse how increased competition increases AND decreases efficiency. To reach L4, analysis of both sides is needed.</p> <p>Relevant analysis includes:</p> <p>A. Diagrams: Theory of the firm looking at benefits of moving from a monopoly/oligopoly type model towards a more competitive (perfectly competitive) market. (L2). Diagrams need developing in terms of EITHER:</p> <ul style="list-style-type: none"> i. Competition leads to lower AC's <u>and</u> therefore productive efficiency OR ii. Competition leads to lower prices <u>and</u> hence allocative efficiency OR iii. Monopoly diagram developed in terms of monopoly leading to underproduction/consumption <u>and</u> allocative efficiency <p>B. Written analysis in terms of:</p> <p>Productive efficiency occurs (L2) <u>as firms want to lower AC</u> (OR use fewer scarce resources OR produce where AC=MC) in order to lower prices (L3) OR to increase profits (L3) OR to retain/attract customers (L3)</p> <p>Reduced 'X' inefficiency (L2) as firms have to reduce costs in order to remain competitive (L3)</p>	20	<p>Level 4(a): possible judgement includes:</p> <p>The <u>scale</u> of increased competition: if only small then this is likely to have much less impact.</p> <p>Arguably it is not the level of competition but the <u>threat</u> of competition (and the <u>contestability</u> of the market) that matters.</p> <p>Impact varies from market to market (eg impact in a natural monopoly would be bad)</p> <p>ACCEPT DIAGRAMS FOR ANALYSIS AS LONG AS THEY ARE EXPLAINED WITH REFERENCE TO ECON. EFFICIENCY.</p> <p>DO NOT reward analysis marks for simple references to "increased competition makes firms lower costs OR prices". This is L2 as there is no analysis of WHY.</p> <p>Level 3: To receive higher L3 (8–10 marks) there must be clear application to transport markets in the answer.</p>	<p>Level 4(a): (16–20 marks) For a discussion which includes a judgement as to whether or not increased competition will increase economic efficiency.</p> <p><i>NOTE: to reach L4(a) balanced discussion must already be present</i></p> <p>18–20 marks: balanced discussion with good judgement</p> <p>16–17 marks: balanced discussion with weak judgement</p> <p>Level 4(b): (11–15 marks) For a discussion of whether or not increased competition will lead to greater economic efficiency. Two-sided economic analysis.</p> <p>13–15 marks: balanced discussion with some transport application</p> <p>11–12 marks: basic discussion (there analysis of one side is only basic)</p> <p>Level 3: (5–10 marks) One sided analysis: increased competition will OR will not increase economic efficiency.</p>

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				Content	Levels of response
		<p>Allocative efficiency (L2) as firms sell their products at a price closer to MC (L3) OR firms wanting to produce exactly those goods or services that consumers want <u>in order to retain/attract consumers</u> (L3)</p> <p>Dynamic efficiency gains (L2). Firms invest in greater research and development in order to develop more innovative products OR production techniques(L3)</p> <p>Possible analysis of why increased efficiency MAY NOT occur includes:</p> <ul style="list-style-type: none"> • Natural monopoly (L2) – firms no longer gain such large economies of scale OR due to high fixed costs no longer being spread out over such a large output level. • Potential loss of dynamic efficiency (L2) with lower R&D spending due to the possible loss of supernormal profits • Increased competition may result in firms trying to cut costs and hence generating more negative externalities (L2) eg pollution OR less safe modes of transport OR reduced service provision OR which involves an inefficient allocation of resources OR involves scarce resources not being allocated correctly 		<p>Level 2: Answers in this level will be able to recognise that increased competition results in greater productive and allocative efficiency but will fail to analyse/explain why this is the case.</p> <p>OR answers may just refer to competition forcing firms to lower costs of production but not analysing why.</p> <p>Level 1: Answers may identify or define productive, allocative or dynamic efficiency OR provide a general definition of what is meant by 'economic efficiency'.</p>	<p>8–10 marks: <i>Good analysis</i>: one sided analysis which is nevertheless good 5–7 marks: <i>Basic analysis</i>: one sided analysis which is only basic in nature</p> <p>Level 2: (3–4 marks) For an application of knowledge and understanding of the impact of increased competition on economic efficiency but <u>lacking any relevant analysis.</u></p> <p>Level 1: (1–2 marks) For knowledge and understanding of what economic efficiency OR knowledge of what policies the government has introduced to raise competition (eg privatisation/deregulation)</p> <p>NOTE: PURELY THEORETICAL ANSWERS WHICH LACK ANY TRANSPORT REFERENCE WILL GAIN A MARK AT THE BOTTOM OF THE RELEVANT <u>BAND</u></p>

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			<ul style="list-style-type: none"> Accept analysis of why decreased/less competition may increase economic efficiency ie accept analysis in favour of nationalisation. ACCEPT analysis of monopolistic competition/oligopoly NOT achieving economic efficiency AS LONG AS explanation of why allocative OR productive efficiency does not occur. 			

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3	(a)	<p>Relevant factors include:</p> <ul style="list-style-type: none"> • Lower prices of cars in real terms/increased competition between car manufacturers • Lower running costs in real terms • Increased price of substitute modes of transport (eg buses/trains) • Perceived unreliability of alternative modes of transport. (eg uncertainty of timetables for public transport OR lack of substitutability) • Increased real incomes (with cars seen as a 'normal good' with positive income elasticity of demand) OR increased disposable incomes • Shifts in tastes and fashion • Higher levels of car ownership • Increased population/number of households • Growth of the road network in the UK (accept analysis of this in terms of increased supply) • Increased travelling and spending on social and holiday events. As such, car use may be seen as a 'derived' demand. <p>Relevant analysis of these may include:</p> <p>Higher demand for car use has resulted from increased disposable incomes (L1), for example over the past decades incomes, on average have risen at a greater rate than inflation (L2). This means that households have more income to spend on goods and services and therefore they may decide to buy a car rather than rely upon public transport – hence the demand for cars rises (L3) cars become more affordable (L3)</p>	15	<p>Candidates are expected to analyse possible reasons why there has been a rise in car use.</p> <p>Identification of factors = Level 1</p> <p>Identification AND explanation of factors = Level 2</p> <p>Analysis of HOW each factor has resulted in a rise in car use = Level 3</p> <p>Level 3: each factor must be clearly analysed – <u>in other words, there must be clear development of why each factor has resulted in increased car use.</u></p> <p>ACCEPT RELEVANT S & D DIAGRAMS FOR ANALYSIS AS LONG AS EXPLAINED/REFERRED TO</p>	<p>Level 3: (9–15 marks) For clear analysis of different reasons why demand for car use has risen. In more detail, marks will be awarded as follows:</p> <p>13–15: <i>Very good analysis</i>: good analysis of two or more factors</p> <p>11–12: <i>Good analysis</i>: Good analysis of one factor OR basic analysis of two</p> <p>9–10: <i>Basic analysis</i>: basic analysis of one factor</p> <p>Level 2: (5–8 marks) For an application of knowledge and understanding of the reasons why car use has risen.</p> <p>7–8 marks: <i>Good application</i>: 2 or more factors identified and explained.</p> <p>5–6 marks: <i>Basic application</i>: 1 factor identified and explained.</p> <p>Answers in this level will <u>identify</u> and <u>explain</u> different factors but fail to analyse these in terms of why it results in a rise in car use. In other words, such answers <u>describe</u> the characteristic given rather than <u>analysing</u> it.</p>

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

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Question		Answer	Marks	Content	Guidance
					Levels of response
	(b)	<p>Candidates are expected to analyse how road user charging will successfully correct market failure before analysing the possible problems of such a policy. (Note: accept answers which develop road user charging or electronic road pricing solutions.)</p> <p>Relevant analysis of how road user charging may work includes:</p> <ol style="list-style-type: none"> 1. <u>A diagram</u> showing supply/MPC shifting to the left AND resulting in a higher price/reduced quantity ASLONG as there is some explanation of the diagram offered. 2. <u>Written analysis</u> which makes BOTH the following points clear: <ol style="list-style-type: none"> a. consumers are forced to pay the full social costs of their actions OR pay a user charge equal to external costs OR that the charge will force consumers to internalise the external cost/negative externality) b. AND that this results in reduced consumption/a contraction of demand (and hence the market failure of overconsumption is removed) OR it results in a switch in modes of transport 3. Written analysis that the government can use revenue from charging to fund public transport: lower price of public transport substitutes will increase demand OR lower demand for car use. 	20	<p>Level 4(a): possible judgement includes:</p> <p>Road user charging will be more likely to be effective if introduced alongside other policies (eg subsidies) OR as part of an integrated solution</p> <p>Whether or not it succeeds ultimately depends upon whether or not there is an alternative to the car in place to begin with.</p> <p>ACCEPT A DIAGRAM SHOWING A LEFTWARDS SHIFT OF SUPPLY ONLY IF EXPLAINED</p> <p>Level 3: To receive higher L3 there must be explicit reference to congestion in the answer.</p>	<p>Level 4(a): (16–20 marks) For a discussion which includes a judgement as to whether or not road user charging will reduce congestion. Two sided analysis must also be present.</p> <p><i>NOTE: to reach L4(a) balanced discussion must already be present</i></p> <p>18–20 marks: balanced discussion with good judgement</p> <p>16–17 marks: balanced discussion with weak judgement</p> <p>Level 4(b): (11–15 marks) For a discussion of whether or not road user charging will reduce congestion. Accept relevant diagrams for analysis marks.</p> <p>13–15 marks: balanced discussion</p> <p>11–12 marks: basic discussion (where analysis of one side is only very basic)</p> <p>Level 3: (5–10 marks) For analysis of either how road user charging works OR analysis of the limitations of it. ie purely one sided answers.</p>

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Question			Answer	Marks	Content	Guidance
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			<p>Possible analysis of the problems/limitations of such a scheme include:</p> <ul style="list-style-type: none"> • <u>What level to set the charge at?</u> Too high and underconsumption results; too low and there will still be overconsumption. • <u>Difficult to accurately measure external costs</u> • <u>Alternative needed:</u> Road charging will only be effective if there is an alternative in place to start with. Without this, then people will not switch modes of transport and, hence, road congestion will remain • <u>PED:</u> With inelastic demand for car use, such charges would have minimal impact unless set at a very high level • <u>Displacement:</u> User charging schemes which are only in place on certain roads could result in significant displacement of traffic on to roads where charges are not incurred. In this sense it may only move the congestion from one place to another • <u>Set up costs</u> could be immense and, hence, there is a significant opportunity cost to the government of introducing such schemes. • <u>Regressive nature of the user charge</u> • <u>ONLY accept explicit comparisons with other policies</u> where BOTH: <ul style="list-style-type: none"> i. analysis of why user charging works has already been provided ii. Where explicit comparison is made clearly analysing why the alternative is better 		<p>DO NOT reward references to there being political problems involved in introducing such a system</p>	<p>8–10 marks: <i>Good analysis:</i> one sided analysis which is nevertheless good</p> <p>5–7 marks: <i>Basic analysis:</i> one sided analysis which is only basic in nature</p> <p>Level 2: (3–4 marks) For an application of knowledge and understanding of what road user charging is.</p> <p>Answers in this level may simply provide examples of where road user charging has been used but lack relevant economic analysis of how it would work.</p> <p>Level 1: (1–2 marks) For knowledge and understanding of what road user charging is OR what market failure is</p>

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4	(a)	<p><u>Three are 3 approaches to gain analysis marks:</u></p> <p>A. A policy which achieves ‘modal switch’(analysis could include how the policy switches passengers (or freight) away from road based modes of transport)</p> <p>B. A policy which reduces demand for unsustainable modes/increases demand for sustainable modes (analysis must develop the basic idea that higher price reduces demand, for example, with reference to fewer scarce resources being used OR the mechanism by which higher price lowers demand OR an explained diagram)</p> <p>C. A policy which reduces negative externalities (analysis must include reference to reduced overconsumption OR achieving allocative efficiency)</p> <p>Relevant examples include:</p> <ul style="list-style-type: none"> • Road pricing/road user charging • Subsidies to public transport operators • Government investment in public transport infrastructure • Air Passenger Duty (APD) • Differential excise duties and other green taxes (accept reference to indirect taxes) • The car scrappage/‘cash for clunkers’ scheme • Accept reference to HS2 if developed in terms of moving people off roads/out of cars • Tradeable permits (eg CO2 emissions from planes) 	15	<p>The classic definition of sustainability is that provided by the Brundtland Report (1987) as development “which meets the needs of the present without compromising the ability of future generations to meet their own needs”.</p> <p>Identification of relevant policy = Level 1</p> <p>Identification AND explanation of the policy = Level 2</p> <p>Analysis of HOW the policy achieves modal switch/greater consumption of public transport = Level 3</p> <p>For level 3, accept diagrams if explained with reference to either increased use of public transport AND/OR lower demand for cars</p>	<p>Level 3: (9–15 marks) For a clear analysis of examples of sustainable transport policies</p> <p>13–15: <i>Very good analysis</i>: good analysis of two or more policies</p> <p>11–12: <i>Good analysis</i>: Good analysis of one policy OR basic analysis of two</p> <p>9–10: <i>Basic analysis</i>: basic analysis of one policy</p> <p>Level 2: (5–8 marks) For an application of knowledge and understanding of sustainable transport policies.</p> <p>7–8 marks: <i>Good application</i>: 2 or more policies are identified and explained (BUT NOT analysed)</p> <p>5–6 marks: <i>Basic application</i>: 1 policy identified and explained.</p> <p>Answers in this level will simply identify policies and explain how they work without reference to lowering demand for car use/increasing demand for public transport.</p>

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

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	(b)	<p>Answers may take the form of analysing how car use is non-sustainable, whilst public transport use (such as trains/buses) is more sustainable. Such answers gain L4 marks by analysing both sides, ie analysing how one mode IS sustainable and ANOTHER is not.</p> <p>IN GENERAL, acceptable analysis includes:</p> <ul style="list-style-type: none"> • Analysis of negative externalities OR over-consumption arising from certain modes (accept diagrams) <u>BUT must develop in terms of inefficient (or incorrect) allocation (or use) of resources</u> • Analysis of there being allocative inefficiency <u>AND incorrect use of scarce resources with different modes</u> • Analysis of how some modes can be viewed as more sustainable if government intervention means externalities are internalised (OR full social cost is paid OR external costs paid) <u>AND this ends overconsumption OR allocative inefficiency.</u> <p>SPECIFIC analysis of modes of transport which may be deemed to be sustainable include:</p> <ul style="list-style-type: none"> • Bus/train/low emission airplane passenger transport: due to the mass transit nature of buses, these exhibit much lower negative externalities than cars, for example. Hence there will be less market failure arising from negative externalities/a lower level of allocative efficiency will exist. 	20	<p>Level 4(a): possible judgement includes:</p> <p>Within certain modes there will be significant variation. For example, newer planes will be more fuel efficient, resulting in lower emissions and, hence, fewer negative externalities will be generated than older model planes.</p> <p>TO GAIN ANALYSIS MARKS, ANSWERS MUST: Explicitly analyse why negative externalities OR allocative inefficiency OR a waste of scarce resources does (or does not) arise</p>	<p>Level 4(a): (16–20 marks) For a discussion which includes a judgement as to the extent to which different modes of transport are sustainable. Two sided analysis must also be present.</p> <p><i>NOTE: to reach L4(a) balanced discussion must already be present.</i></p> <p>18-20 marks: balanced discussion with good judgement</p> <p>16–17 marks: balanced discussion with weak judgement</p> <p>Level 4(b): (11–15 marks) For a discussion of the whether or not different modes of transport are sustainable. There is evidence of economic analysis on both sides of the argument here; for example analysis of why one mode is sustainable and why another is not.</p> <p>13–15 marks: balanced discussion (there is clear economic analysis on both sides)</p> <p>11–12 marks: basic discussion (the analysis of one side is only basic)</p>

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			<ul style="list-style-type: none"> Carrying freight by rail is more sustainable as it involves lower negative externalities and hence a more efficient allocation of scarce resources. Carrying freight on larger vehicles (eg 44 tonnes vehicles) will reduce total emissions and therefore could be deemed to be sustainable <p>SPECIFIC analysis of modes of transport which may NOT be deemed to be sustainable include:</p> <ul style="list-style-type: none"> Car use: given the significant negative externalities arising from car use there will be allocative inefficiency arising from the overconsumption of this good. Air flights: passengers will not take in to account the full social cost of their actions and will therefore over-consume. This will result in an allocatively inefficient use of scarce resources – which is clearly not sustainable. HGV use: with lorries carrying freight, this will cause congestion and therefore generate negative externalities – and a misallocation of resources/allocative inefficiency. 			<p>Level 3: (5–10 marks) For analysis of either why modes of transport are OR are not sustainable.</p> <p>8–10 marks: <i>Good analysis</i>: one sided analysis which is explicitly linked to transport mode(s)</p> <p>5–7 marks: <i>Basic analysis</i>: one sided analysis which is purely theoretical and not linked to different modes of transport</p> <p>Level 2: (3–4 marks) For an application of knowledge and understanding in terms of simple identification of which general modes of transport are more sustainable than others.</p> <p>An answer in this level may state that cars are less sustainable than buses but not explain/analyse why at all.</p> <p>Level 1: (1–2 marks) For knowledge and understanding of what sustainability is OR examples of different modes of transport.</p>

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