GCE

Economics

Mark Scheme for June 2011

Question			Expected Answer	Mark	Rationale/Additional Guidance
Section A					
1	(a)		**Explain what is meant by the term "sustainable transport policy" (line 2).** One mark for a clear definition such as that given by the Brundtland Report: policy *"that meets the needs of the present without compromising the ability of future generations to meet their own needs"* OR one mark for a definition that it involves policies which meet current demands without jeopardising the ability to meet the demand of future generations. One application mark for reference to sustainability <u>in transport</u>. Accept any relevant policy which achieves modal switch OR which attains more sustainable distribution. Accept EITHER specific examples of policies (e.g. road pricing or use of cleaner fuels) OR general objectives (e.g. to move people from car to public transport). DO NOT reward general policies lacking transport reference (e.g. "taxation")	**[2]**	One mark for knowledge of sustainability in general plus one mark for some application to transport <u>Knowledge mark</u>: accept a clear definition OR reference to a policy which <u>does not reduce</u> the number of scarce resources available. NOTE: vague reference to "scarce resources" alone is not enough. <u>Application mark</u>: any policy which aims at achieving modal switch. For example, policies which: • reduce car use • encourage greater use of public transport • moves freight from road to rail/sea • reduces the distance travelled by modes of transport (including greater co-operation in the use of HGV's) • make transport users pay the true price of their actions (Eddington Report)
	(b)		**Using Fig. 1, what evidence is there to suggest that Stuttgart had been more successful than Edinburgh or Bristol in reducing reliance on the car?** Award one mark for each of the following: • An explicit statement that Stuttgart has much lower modal use of cars than either Edinburgh or Bristol (simple quoting of stats not enough). Accept Bristol/Edinburgh higher modal share • An explicit statement that emissions levels of sulphur dioxide OR nitrous oxides <u>are lower</u> in Stuttgart than in both Edinburgh and Bristol (accept "lower pollution") • It HAS NOT been successful as Stuttgart has the greatest car ownership still.	**[2]**	DO NOT reward reference to general policies e.g. "reducing negative externalities" NOTE: DO award one mark where reference is made to the fact that it has **not** been successful ie Stuttgart still has the highest level of car ownership.

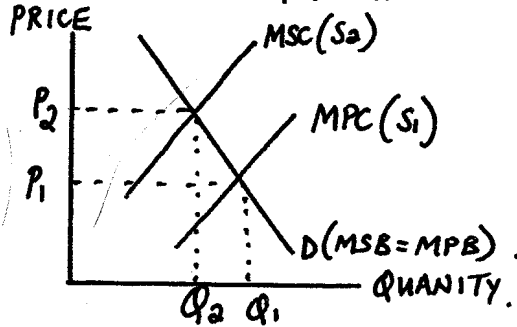| Question		Expected Answer	Mark	Rationale/Additional Guidance
(c)	(i)	**State two factors which the UK government might use in forecasting road transport demand. Explain how each of these factors affects the future demand for road transport.** One mark is available for identifying each factor, e.g.: • GDP (or economic growth) • Disposable incomes • Fuel prices / prices of complementary goods (DO NOT reward references to "running costs" or "car prices") • Population growth / demographic trends / the number of households. • Levels of car ownership / license holders • Industrial output • The price / availability / quality of public transport / substitute goods • the number of goods imported in to the country • previous data / historic data • PED or YED estimates • <u>Changes</u> in future tax rates OR government policy DO NOT reward simple references to price of road transport One further mark is available for relevant elaboration (see right hand column). Such explanation must explain how the factor results in a change in the future level of demand. Two marks maximum if only one factor is identified/explained. DO NOT award explanation marks for simple statements such as "increased fuel prices lower demand" until there is clear development of this. Likewise, do not give the explanation mark for "increased GDP will raise demand" until there is an explanation of WHY this is so.	[4]	Relevant elaboration may include: • The higher the GDP the higher the demand for goods & services, therefore the greater the demand for transportation / demand for cars. • Increased incomes increase the affordability with households benefiting from higher incomes Accept relevant development in terms of YED. • The higher price of fuel will result in cars being less affordable to run and, as such, there will be a reduction of demand. Also accept reference to a rise in price of complements. • The greater the population: (i) the greater the demand for goods & services – hence greater 'derived' demand for transport OR (ii) increased numbers of cars purchased BUT DO NOT award explanation mark for "higher population means more people on roads" as too vague • The greater the number of cars then the greater the level of accessibility which will result in increased numbers of journeys taken by car. • Increased output may require more deliveries of raw materials and/or finished goods & services - hence increased 'derived' demand for transport. • with public transport being a substitute to car use, if public transport falls in price then there should be a fall in demand for cars and vice versa **DO NOT REWARD THE SAME EXPLANATION TWICE (ie if both explanations relate to derived demand then award only one explanation mark)**

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1	(c)	(ii)	**State and explain two problems which the UK government may have in making such forecasts.** One mark is available for identifying each factor. For example: • Estimates. Data is based upon estimated variables (such as forecasts of GDP statistics). These may be wrong – hence inaccurate forecasts. • Forecasts assume patterns of causality (e.g. higher fuel prices reduce car use) which may be wrong OR assumed relationships may be wrong (e.g. if YED differs then increased income has different effects) • It is difficult to decide exactly what factors to include in forecasts (e.g. what factors determine demand?) • There is uncertainty - the variables on which the data is based are unpredictable OR unforeseen events may occur such as natural disasters/economic shocks OR other factors need to be taken in to account which cannot easily be predicted. • Data can be time consuming / costly /difficult to collect • Forecasts will be based upon imperfect information / survey data may be unrepresentative or skewed – hence forecast data may be inaccurate • Data may be volatile/unstable which causes problems	[4]	One mark is available for development of each point. Development may take two forms: A. Clear development of the point itself which simply explains/develops the nature of the problem: For example, estimated data will be needed such as future fuel prices. Gaining accurate data is almost impossible – hence possible inaccuracy. B. Clear development of the consequences of the point: For example, if GDP is underestimated then there will be more cars on the road as people have higher disposable incomes (and therefore can afford to buy cars)–hence forecasts will underestimate road use DO NOT reward two points which simply develop the same issue ie uncertainty developed with two different examples

1	(d)	(i)	**Using a diagram, comment on the impact of a subsidy to public transport operators.**
			<u>Two marks for analysis</u>:
			Up to two marks are available for a correct diagram:
			• one mark for rightwards shift of supply curve
			• one mark for correct labelling of the diagram
			  (price/quantity axes, curves and equilibrium points).
			  DO NOT REWARD A SHIFT OF DEMAND or AD/AS
			Alternatively, if diagram does not show correct supply shift, award one analysis mark maximum for clear written reference to increased supply OR rightwards shift of supply OR lower costs of production
			
			<u>NOTE: WITHOUT ANALYSIS THE ANSWER SCORES 0</u>.
				[5]	<u>3 marks are available for relevant comment including:</u>
					• Depends upon type of subsidy (capital v fare)
					• With inelastic PED for public transport the impact of (fare) subsidies will be limited.
					• Size of subsidy - to have a noticeable impact, the subsidy will have to be very large
					• There will be a cost to govt (and opportunity cost)
					• Negative YED? Is it seen as an inferior good? If so then subsidies may be ineffective
					• What is it used for? Is it used to increase profits?
					• Is subsidy only short term or long term?
					• Fares subsidies won't work if prices are still higher than that of alternatives
					• Subsidies may lead to complacency/inefficiency
					One point well developed can gain all 3 eval. marks.

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		(ii)	**Discuss whether a greater role for the public sector in the provision of transport services will increase economic efficiency.**
			 Three marks max for a one sided answer:
			 Up to 3 marks for any relevant economic analysis. EITHER:
			     A. <u>Analysing why growth of the public sector is good / private sector is bad:</u>
			 • Lower AC's: A larger public sector may enable firms to gain economies of scale (natural monopoly). Hence productive efficiency as firms produce at lowest AC. In contrast, smaller private firms may not benefit from economies of scale - higher AC's and prices. (This is very relevant in provision of infrastructure with very high FC's).
			 • Public sector firms may be more concerned with service provision (allocative efficiency), aiming to satisfy consumer demands & not profit maximising. Accept "meets wants"
			 • A greater role for the public sector will ensure that the market failure arising from negative and positive externalities is removed – hence allocative efficiency.
			 • In public sector firms, workers may be more motivated – hence greater productive efficiency.
			 • It will avoid the duplication of services which private sector competition may result in
			 OR:
			     B. <u>Analysing why the private sector is good/public sector bad:</u>
			 • Lower AC's in the private sector due to the desire to maximise profits
			 • The private sector may be more efficient as firms drive down costs in order to compete on prices
			 • Hence lower prices may result in the private sector
			 Award three separate points OR one point well developed:
			 One mark for a basic point e.g. lower AC's OR lower prices OR better service OR fewer externalities OR higher motivation OR higher investment
			 Two marks where there is clear development of the point e.g. why lower AC's may arise due to economies of scale.
			 Three marks for clear reference to a type of economic efficiency.
				[8]	*Award evaluation marks only for <u>two sided response</u> which involves explicit criticism of the public sector.*
					
					 Up to five marks for evaluation which includes clear reference as to why the public sector is less efficient:
					 • A greater role for the public sector may well result in complacency and productive inefficiency if firms rely upon government support/subsidies. X inefficiency.
					 • Lack of competitive pressures result in inefficiency
					 • Public sector firms may be inefficient as they lack the incentive of private firms to min. AC (to max profits).
					 • Possible govt. failure-intervention causes inefficiency
					 • Growth in the public sector may well result in firms being too large and diseconomies of scale occurring –higher AC's & productive inefficiency.
					 • If firms lose touch with what consumers demand then they risk allocative inefficiency as they no longer produce goods & services which consumers demand
					 • Cost to govt of expansion (opportunity cost?)
					 • It depends how much the public sector grows by (and how big it was to begin with). ie what is the exact level of public sector involvement?
					 • It depends what exact role the public sector undertakes ie service provision or regulation?
					 • Possible government failure
					
					 <u>One point which is well made can gain up to three marks:</u>
					 Award one evaluation mark where a relevant factor is identified e.g. possible complacency.
					
					 Award two evaluation marks where there is clear development of the point e.g. why this may be the case.
					
					 Award three evaluation marks for clear development in terms of a specific type of economic efficiency.
					 NOTE: WITHOUT ANALYSIS THIS SCORES ZERO.

			Section A Total	**[25]**	

Question	Expected Answer	Mark	Rationale/Additional Guidance
Section B			
2	**Analyse how barriers to entry determine the degree of competition in transport markets**	[15]	Relevant e.g.s of barriers to entry in transport include:
	Candidates should analyse HOW high barriers result in lower levels of competition (or vice-versa)		• Economies of Scale (L1). Companies such as Stagecoach and Arriva will have huge EOS as they are national firms providing bus services (L2). Hence potential entrants find it difficult to compete on price against such huge firms & won't enter the market(L3)
	Identification of examples of barriers = Level 1		
	Identification AND explanation of transport barriers = Level 2		
	Analysis of HOW barriers result in less competition = Level 3		• High set up & sunk costs (L1), e.g. advertising or research before launch of a new train service (L2). High costs deter firms from entering the market as these will not be recouped on leaving the market and many will not be willing to take this risk. Hence fewer firms – and less competition – in the market (L3).
	Level 3 [9-15]: Analysis of HOW high barriers reduce competition (or vice versa). If there is no application to transport then mark at the lower end of each band within the level (eg 13/11/9 marks)		
	13-15 marks: *Very good analysis:* 2 or more barriers to entry must be analysed in terms of why these lower competition. 11-12 marks: *Good analysis*: One barrier clearly analysed. 9-10 marks: *Basic analysis:* simple analysis of one barrier OR clear analysis of one barrier not applied to transport OR basic analysis in general terms that lower barriers result in firms being able to enter markets freely and therefore compete – hence there will be a high degree of competition in markets.		• Existing firms may use predatory pricing (L1), for example lowering bus fares below costs of production (L2). New firms will not possibly be able to sell goods at such low prices and hence they will not enter markets–less competition (L3). • Inadequate information (L1) as to profitable routes & knowledge of where new services may be provided (L2). If potential entrants are unaware of the profits which could be made they won't enter markets (L3).
	Level 2 [5-8]: For an application of knowledge and under-standing of different barriers to entry in transport: 7-8 marks: 2 or more transport barriers identified and explained 5-6 marks: 1 transport barrier identified and explained. Award 5 marks for recognising that higher barriers = less competition.		• Legal barriers (L1). The need to meet safety criteria and prove that transport services will meet minimum standards can be significant (L2). Such costs will provide an obstacle to new potential entrants who may not be able to afford to meet the standards - hence resulting in less competition (L3).
	Level 1 [1-4]: Knowledge & understanding of barriers: 3-4 marks: identification of two or more barriers not applied to transport markets 1-2 marks: identification of one barrier lacking clear transport application OR general definition of barriers		• Brand loyalty (L1). Customers may always use the same taxi firm or fly with the same company (L2). Knowing the difficulties of entering such markets may deter new firms from doing so (L3).

Question			Expected Answer	Mark	Rationale/Additional Guidance
	(b)		**Discuss the extent to which the UK bus market is contestable** <u>Possible analysis as to why it is contestable includes</u>: Deregulation in 1986 removed a significant legal barrier to entry (L1) – the requirement to prove a "need" existed for new services (L2). New companies are now only required to obtain an operator's license by registering their company and meeting basic safety standards (L2). In theory, by removing such legal barriers, this increased contestability as <u>it enabled new firms to enter the market more easily</u> (L3). New entrants are able to bid for subsidised routes (L1) through the tendering process (L2). THIS RESULTS IN NEW FIRMS BEING ABLE TO ENTER MARKETS (L3) ie contestable The bus market in some areas resembles monopolistic competition (L1). In such markets, there are a large number of firms and each is too small to engage in predatory pricing and take advantage of economies of scale (L2) ie in monopolistic competition, barriers are low (L2). HENCE OTHER FIRMS ARE ABLE TO ENTER THE MARKET (L3) ie it is contestable. <u>Possible analysis of why it is not contestable includes</u>: In practice, despite deregulation, the industry is not contestable. Local oligopolies have emerged with dominant firms existing in different areas. This has resulted in barriers to entry existing which have reduced contestability. Possible barriers to entry include: • Dominant incumbent local bus firms (often with substantial economies of scale) can lower their prices to a much greater extent than new, smaller firms.	[20]	*SEE EARLIER QWC DESCRIPTORS ON PAGE 2* For Level 4(a) answers, candidates will be expected to look at arguments on both sides of the debate and then come to a judgement as to whether or not it is contestable. Answers which are entirely one sided and look at why the bus market is OR is not contestable will receive a maximum of 10 marks. For Level 3, accept relevant monopolistic competition diagrams only when there is an explanation referring to low barriers and contestability.

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	• Imperfect information exists with potential entrants often unsure of what profitable opportunities exist and which routes they should operate to maximise profits. To gain such knowledge, firms may be placed at a significant cost disadvantage. • Sunk costs do exist in the form of advertising of new routes and new company services, partly to overcome the brand loyalty which exists • Whilst legal barriers may be lower than they were 25 years ago, there are still safety standards for rolling stock which form a barrier to entry as new firms have to meet these safety standards as otherwise they will not be allowed to enter the industry • Accept relevant oligopoly theory AS LONG as this is in the context of contestability. In other words, analysis here takes the form of oligopoly reducing contestability due to high barriers to entry. Likewise accept analysis of barriers established by local monopolies. **Level 4 (a) [16-20]** For two sided analysis AND judgement as to how significant barriers to entry are in the bus industry. **Level 4 (b) [11-15]** For two sided discussion lacking judgement. **Level 3 [5-10]** One sided analysis ie analysis of why the bus market is OR is not contestable. (This may take the form of analysing existing high barriers to entry). **Level 2 [3-4]** For an application of knowledge and understanding of deregulation in the bus industry. **Level 1 [1-2]** For knowledge and understanding of what contestability is.		Possible judgement includes: • The degree of contestability varies from region to region. In other words, the answer to the question depends upon which area of the country you are talking about • Whilst deregulation has reduced some barriers to entry a number remain e.g. high fixed costs/start-up costs of bus depots. Hence not contestable. • The level of contestability depends upon how active regional Traffic Commissioners are • It depends which market is being considered-the deregulation of long distance coaches has been more successful than local bus services. **Level 4(b):** 13-15 marks: balanced discussion 11-12 marks: basic discussion where there is only basic analysis of one side of the argument. **Level 3:** 8-10 marks: relevant analysis applied explicitly to the bus industry 5-7 marks: relevant analysis of deregulation which is not specifically applied to the bus market **Level 2:** Answers in this level will simply describe changes in the bus industry. In other words, applying knowledge of changes in the bus industry. **Level 1:** answers in this level will simply state what deregulation or contestability are.

Question			Expected Answer	Mark	Rationale/Additional Guidance
3	(a)		**Analyse, using a diagram, the negative externalities arising from increased air transport use.** **Level 3 [9-15]** For analysis including a diagram: 13-15 marks: *Very good analysis*: A perfect diagram plus clear analysis of two points. (If no application to air transport then award only 13 marks). 11-12 marks: *Good analysis:* A perfect diagram plus EITHER clear analysis of one point OR basic analysis of two points. In addition, award 11-12 marks for a partially correct diagram plus analysis of two points. (If not applied to air transport then only 11 marks). 9-10 marks: *Basic analysis*: A partially accurate diagram plus EITHER good analysis of one point OR basic analysis of two or more points (9-10). If not applied to air transport then 9 marks. (A perfect diagram alone = 9 marks; a perfect diagram plus basic analysis of one point = 10). An inaccurate diagram with written analysis gains 9 marks max. **Level 2 [5-8]** Application of knowledge and understanding. 7-8 marks: A partially accurate diagram plus identification of two points = 8 marks, one point = 7 marks. 5-6 marks: Partially accurate diagram alone OR no diagram/ inaccurate diagram with identification of relevant points (6 max) **Level 1 [1-4]** Knowledge and understanding: 3-4 marks: a clear definition of externalities (SC>PC) 1-2 marks: a basic definition (ie a cost to third parties) OR an inaccurate diagram alone = 4 max.	[15]	**Diagrams:** An 'accurate' diagram gains nine marks (bottom L3) but only if perfectly correct including <u>MSC/MPC</u> labelling. A 'partially accurate' diagram may have an error in labelling (e.g. axes missing / equilibrium points the wrong way round / incomplete labelling / supply rather than MSC/MPC approach taken). A 'partially correct' diagram will have correct MSC/MPC as a minimum. An 'inaccurate' diagram will shift demand OR invert MPC and MSC. If there is no written analysis six max. If NO diagram is used OR an inaccurate diagram is produced then a MAXIMUM of nine marks is available. **Relevant analysis includes the following points:** - Over-consumption occurs (L2) as consumers fail to see the true social costs of their actions / don't pay the true price – <u>hence air travel is cheaper than it should be</u> / <u>underpriced</u> (L3) - Allocative inefficiency/a misallocation of scarce resources occurs (L2) as too many resources will be used producing goods & services which society does not want (L3) - Increased pollution from plane emissions (L2) worsens asthma and incurs cost to the NHS (L3) OR to innocent local residents (L3). - Noise pollution, visual intrusion and blight arise from planes and airports (L2). These factors will have negative impacts upon local house prices and quality of life for people living nearby (L3) - Accept increased risk of plane accidents (L2) – third party costs in terms of cost to NHS of treating injured, cost of response by emergency services and injury to innocent 3rd parties (L3).

Question			Expected Answer	Mark	Rationale/Additional Guidance
3	(b)		**Discuss whether increased taxation or changes to regulation would be more successful in solving the market failures arising from negative externalities caused by increased air transport use**	[20]	*SEE EARLIER QWC DESCRIPTORS ON PAGE 2*
			Answers are expected to analyse the arguments for and against both methods of government intervention. Taxation: analysis: A diagram showing the supply curve shifting to the left with some basic explanation. Alternatively, clear written analysis that taxation provides a deterrent as higher prices will deter consumers from purchasing a good (e.g. Air Passenger Duty). Simple reference to increased price IS NOT enough until developed in terms of taxes discouraging certain behaviour. Regulation: analysis: Accept a diagram showing leftwards shift of supply with some basic explanation in terms of either: regulations increasing airlines' costs of production (e.g. increased compliance costs such as health and safety) OR regulation setting limit on production/supply enforced by law Written analysis must take the form of explaining how an individual's behaviour is altered. For example, the threat of a fine or other legal action results in a firm <u>altering their behaviour</u> and correcting market failure. Accept analysis of regulation in terms of barriers to entry reducing supply OR output in the industry OR forcing firms to leave the industry. Alternatively, accept clear written analysis that regulation reduces supply and hence raises price and reduces demand. Drawbacks to taxation include: • There is a problem deciding what level of tax to introduce – ideally equal to external costs but these are difficult to measure • Taxation needs to be introduced internationally to avoid companies simply relocating • With inelastic PED high taxes on passengers will be much less effective at internalising externalities • It depends upon how large the rise in tax is.		NOTE: for analysis of policies, accept relevant diagrams BUT there must be some basic explanation / reference to these. Otherwise, Level 2 will be awarded. Valid application of regulation to air transport includes possible emissions and noise regulations, government restrictions over the size and design of planes, government control over the possible number of landing slots and possible restrictions over the number of flights allowed. Given the context of air travel, accept reference to pollution / tradeable permits ALSO accept price controls as a form of regulation

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	Drawbacks to regulation include: • Regulation costs the government money to enforce and therefore incurs an opportunity cost. • The effectiveness of regulation totally depends upon the willingness of the govt to enforce and police it. • Effectiveness depends upon the level of fines incurred – if too low then regulations may be ignored • There is no on going incentive to improve once standard set • There is a need for international agreement here • Regulation may create black market conditions • Possible government failure if regulation set at wrong level • Regulation sets barriers which reduce competition in mkts. **Level 4 (a) [16-20]** Discussion of BOTH policies which includes a judgement as to which policy would be best – taxation or regulation. Two sided analysis of BOTH needed. Answers with no application to air transport =17 marks max. **Level 4 (b) [11-15]** For discussion of the effectiveness of taxation and / or regulation in air transport: 13-15 marks: *balanced discussion*: Analysis of advantages & disadvantages of <u>both</u> policies applied to air = 14-15 marks Analysis of advantages & disadvantages of one policy (ie two sided answer) plus one sided analysis of second policy with both applied to air transport = 13 marks ** 11-12 marks: *basic discussion*: analyses the advantages and disadvantages of EITHER taxation OR regulation. If no application to air travel then award 11 marks. **Level 3 [5-10]** Analysis of how taxation and/or regulation can correct market failure OR analysis of advantages of one policy along with analysis of drawbacks of another. 8-10 marks: analysis of two policies. 5-7 marks: analysis of one. **Level 2 [3-4]** For application of knowledge & understanding of how taxation and regulation can correct market failure. 4 marks: explains relevant eg's of BOTH tax and regulation 3 marks: explains one example of either tax OR regulation **Level 1 [1-2]** For knowledge and understanding of tax/regulation		**Level 4(a):** the advantages and disadvantages of BOTH policies must have been discussed. Possible judgement includes: • Taxation is better than regulation as taxes raise the government revenue whilst regulation actually incurs a net cost to the government. • Neither policy will be effective if not introduced on an international basis. To be effective international agreement is needed. • Given the limitations of both policies, other approaches, such as tradeable permits, may be more effective. • On their own, each policy may be less effective than if combined as part of a wider, more integrated policy. • Simple judgement may take the form of stating that both policies need to be used together. ** Note: If balanced discussion occurs which is not at all linked to air travel then 13 marks will be awarded **Level 1:** One mark for simple definition of each of regulation and taxation.

Question			Expected Answer	Mark	Rationale/Additional Guidance
4	**(a)**		**Analyse the benefits arising from the construction of new trunk roads and motorways** Possible benefits include: • Lower fuel consumption (L1) • Less wear and tear on vehicles (L1) • Reduced journey times (L1) • Profits gained by construction firms (L1) • Increased supply of road space reduces user costs • Reduced congestion, certainly in the short term, if new roads are built at congestion 'bottlenecks' (L1) • Better infrastructure enables firms to deliver goods and services faster (L1) • Firms may locate business closer to new roads (L1) • Possible regional multiplier effects (L1) • Less congestion (L1) • Fewer accidents (L1) and hence reduced cost burden to the NHS • Lower emissions (L1) (as vehicles will travel at a more optimum speed for fuel consumption) **Level 3 [9-15]** For analysis of the different benefits. 13-15 marks: *Very good analysis*: two or more benefits are analysed clearly 11-12 marks: *Good analysis*: basic analysis of two or more benefits OR good analysis of one benefit. 9-10 marks: *Basic analysis*: basic analysis of one benefit. **Level 2 [5-8]** Application of knowledge and understanding of the benefits of road construction. 7-8 marks: two or more benefits are identified & explained 5-6 marks: one benefit identified and explained **Level 1 [1-4]** Knowledge and understanding of the benefits of road construction lacking any <u>explanation</u> / development 3-4 marks: Two or more benefits identified 1-2 marks: One benefit identified only.	**[15]**	Candidates will be expected to explain what the main benefits of road construction are using economic terminology: • Reduced fuel costs (L1) due to lower fuel consumption and less wear and tear on vehicles if they are no longer stopping and starting (L2). Hence reducing costs to the decision maker (L3) • Arguably there will be less congestion, certainly in the short term, if new roads are built at congestion 'bottlenecks' (L1). This will reduce time that workers spend in traffic / reduce wasted time (L2) and hence raise output and productivity (L3). • Better infrastructure enables firms to deliver goods and services faster (L1) hence reducing the fleet sizes required by businesses (L2) and lowering costs of production (L3) • New roads may also result in firms relocating / locating businesses to the area (L1) • Increased government spending on roads and infrastructure within one area may well result in benefits to the local economy via regional multiplier effects • Less congestion may lead to fewer accidents as cars are more spread out on roads (L2) and hence reduced cost burden to the NHS (L3) **Accept correct diagrams** for L3 <u>as long as they are accompanied by an explanation</u>. For example, if using S&D it shows supply shifting to the right it must refer to lower prices/user costs (as the benefit). If using AS&AD and rightwards shift of AS is shown then it must refer to increased output (as the benefit). Also accept rightwards shift of AD as long as macro-economic benefits are recognised.

Question			Expected Answer	Mark	Rationale/Additional Guidance

4	(b)		**Discuss the effectiveness of the COBA method of appraisal in determining the allocation of resources to road building**
			
			 COBA is a decision making technique used by central government as part of the decision making process when deciding upon whether - and also where – to build new roads. It has developed, so whilst early models of COBA were flawed, over time it has become a more sophisticated appraisal technique.
			
			 Good analysis: COBA compares the costs & benefits of road construction. In more detail:
			
			    Costs include the actual costs of construction plus the maintenance costs of the road.
			    Benefits are measured in terms of the reduction in road user costs and includes 3 factors: lower accident costs, time saved by motorists on the improved road network and the reduction in vehicle operating costs.
			
			 Basic analysis: The basis of COBA, as with any CBA, is to gain a single monetary value for the net social benefit (NSB) of a project. The project with highest NSB is undertaken. Scarce resources will be allocated to the project with the highest NSB. In this way, social welfare will be maximised and the govt achieves an optimum allocation of resources.
			
			 Relevant discussion of the effectiveness of COBA includes:
			 • COBA is too 'user based'. The 'benefits' used are measured by the reduction in user costs resulting from new roads. Some argue that COBA attaches too high a cash value to the benefits which motorists derive from new schemes in comparison to other factors.
				[20]	*SEE EARLIER QWC DESCRIPTORS ON PAGE 2*
					
					 NOTE: Answers which discuss general CBA and not COBA can receive a maximum of 12 marks.

Question	Expected Answer	Mark	Rationale/Additional Guidance
	• COBA does not include an estimate for external costs and benefits arising from road construction. It is therefore not fully comprehensive as it ignores indirect costs and benefits. Clearly these are going to be a significant part of any decision making process. • COBA can be a very long and expensive process (eg Newbury bypass COBA took 20 years). • COBA also requires a significant number of value judgements to be made. Eg which factors should be included and how do we value time and life when looking at the benefits of new road construction? • COBA only applies to roads and does not determine the allocation of resources in major areas of transport expenditure such as rail and infrastructure projects (eg airports and docks). As such, COBA doesn't guarantee an optimum allocation of resources across the transport sector as a whole. **Level 4 (a) [16-20]** Discussion which includes a judgement as to how effective COBA is as decision making technique. **Level 4 (b) [11-15]** For discussion of some of the difficulties in using COBA. See right hand side for detail. **Level 3 [5-10]** Analysis of how COBA determines the allocation of resources in transport OR analysis of problems **Level 2 [3-4]** Application of knowledge and understanding of COBA. Will include egs of costs & benefits but no reference to decision making criteria. **Level 1 [1-2]** For knowledge and understanding of COBA		**Level 4(a):** Relevant judgement may include: • Whilst flawed, COBA arguably attempts to perform an impossible task – namely correctly measuring external costs and benefits. As such it does contribute to te decision making process. • When used in conjunction with other policies it will be effective in determining an efficient allocation of resources **Level 4(b):** 13-15 marks: Good discussion with analysis of how COBA works and then at least two criticisms analysed 11-12 marks: Basic/unbalanced discussion. EITHER good analysis of COBA with basic analysis of one limitation OR analysis of general CBA along with analysis of limitations. **12 marks max if CBA rather than COBA discussed** **Level 3:** 8-10 marks: *Good analysis*: analysis of how costs & benefits within COBA are derived (see earlier explanation) 5-7 marks: *Basic analysis*: analysis of the decision making criteria used for any CBA (ie selecting the project which has the highest NSB where NSB = SB – SC) OR analysis of criticisms of CBA generally (rather than COBA).
	Section B Total	**[35]**	
	Paper Total	**[60]**	

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OCR Customer Contact Centre

14 – 19 Qualifications (General)
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For staff training purposes and as part of our quality assurance
programme your call may be recorded or monitored