GradeMax



Mark Scheme (Results)

October 2019

Pearson Edexcel International Advanced Subsidiary

In Economics (WEC11)
Paper 01 Markets in Action

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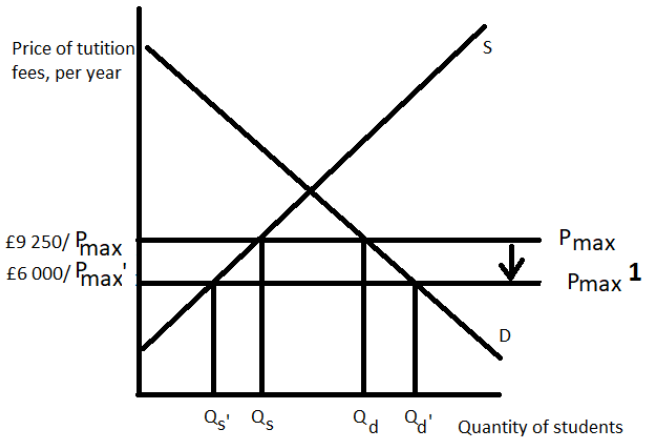
Question	Quantitative skills assessed	Answer	Mark
1	–	B	**(1)**
2	–	A	**(1)**
3	–	D	**(1)**
4	**QS9**: Interpret, apply and analyse information in written, graphical, tabular and numerical forms	C	**(1)**
5	**QS8**: Make calculations of elasticity and interpret the result	C	**(1)**
6	**QS8**: Make calculations of elasticity and interpret the result	B	**(1)**

Question	Draw a diagram to illustrate the impact of a decrease in the maximum price of university tuition fees in the UK. Answer	Mark
7	**Knowledge 1, Application 3** Quantitative skills assessed: **QS4**: Construct and interpret a range of standard graphical forms **QS9**: Interpret, apply and analyse information in written, graphical, tabular and numerical forms. **Knowledge** • 1 mark for drawing a supply and demand diagram showing the original maximum price below the equilibrium price. **Application** Up to 3 marks for the following information included on diagram: • 1 mark for drawing a new maximum price below the original maximum price • 1 mark for showing new quantity supplied and quantity demanded (May be offered in written explanation) • 1 mark for the impact on excess demand (rises)/ shortage increases (May be offered in written explanation)  	**(4)**

Question	With reference to the provision of street lights, explain what is meant by the term 'public good'. Answer	Mark
8	**Knowledge 2, Application 2** **Knowledge** 2 marks for defining 'public good.' • A product that is both non-excludable **(1)** and non-rival **(1)** **Application** 2 marks for applying to the provision of street lights e.g.: • Street lights are non-excludable because it is impossible to prevent anyone from benefitting from the light **(1)** • Street lights are non-rival as when one person benefits from the light it does not reduce the benefit gained by others nearby **(1)** • People would free ride the street lights by not paying but benefiting from them **(1)** making it unprofitable for private sector firms to provide street lights **(1)** • Firms are reluctant to provide street lights due to the free rider problem **(1)** • Public goods are normally provided by the government/ customers can use the public goods free of charge **(1)**	**(4)**

Question	Explain **one** reason why many consumers behave in this way and remain with their current internet providers. Answer	Mark
9	**Knowledge 1, Application 1, Analysis 2** **Knowledge & Analysis** 1 mark for knowledge and a further 2 marks for linked analysis e.g.: • Irrational behaviour is where consumers fail to maximise their utility **(1)** • Rational behaviour is where consumers maximise their utility **(1)** • People may be influenced by others' behaviour **(1)** where they stay with the same provider because their friends and family do **(1)** • People exhibit habitual behaviour **(1)** where they have used the same internet provider and are in a habit of using them/ loyal to the provider **(1)** • Consumers experience inertia **(1)** where they lack the energy or desire to go through the process of switching internet providers **(1)** • Consumers have poor computational skills **(1)** meaning they find it difficult to calculate the amount they can save by switching **(1)** • Consumers feel valued by current internet providers **(1)** so remain loyal to them **(1)** • Consumers may not have information about the possible savings **(1)** and therefore may be unaware that they could get a better deal by switching provider **(1)** **Application** Up to 1 mark for applying to Canada's internet providers, e.g.: • Consumers can save 25% by switching to smaller providers **(1)** • Consumers tend to stay with more expensive providers **(1)**	**(4)**

Question	Using the data in the table, calculate the income elasticity of demand for visits abroad by Chinese citizens. Show your workings. Answer	Mark
10	**Knowledge 1, Application 3** Quantitative skills assessed: **QS8**: Make calculations of elasticity and interpret the result. **Knowledge** EITHER 1 mark for the formula for income elasticity of demand: % change in quantity demanded % change in income **(1)** OR 1 mark for identifying the elasticity: • the income elasticity of demand is positive making them normal goods/ demand is income inelastic **(1)** **Application** Up to 3 marks for calculations: • change in number of Chinese visits abroad: 127 – 122= 5 million change in number of Chinese visits abroad / original number of Chinese visits abroad: 5 ÷ 122× 100 = 4.10 **(1)** % • change in gross weekly earnings (income): ¥1 373 – ¥1 299 = ¥74 change in gross weekly earnings / original gross weekly earnings: 74 ÷ 1299 × 100 = 5.70 **(1)** % • YED 4.10 ÷ 5.70 = +0.72 **(1)** **NB: if correct answer (0.72) is given, award full marks regardless of working.** **Accept rounded numbers and associated YED**	**(4)**

<table>
<tr><th>Question</th><td>Explain how the above table may be used to illustrate the concept of diminishing marginal utility. Use the last column in the table to show your workings.

Answer</td><th>Mark</th></tr>
<tr><td>11</td><td>
Knowledge 1, Application 1, Analysis 2
Quantitative skills assessed:
QS9: Interpret, apply and analyse information in written, graphical, tabular and numerical forms.

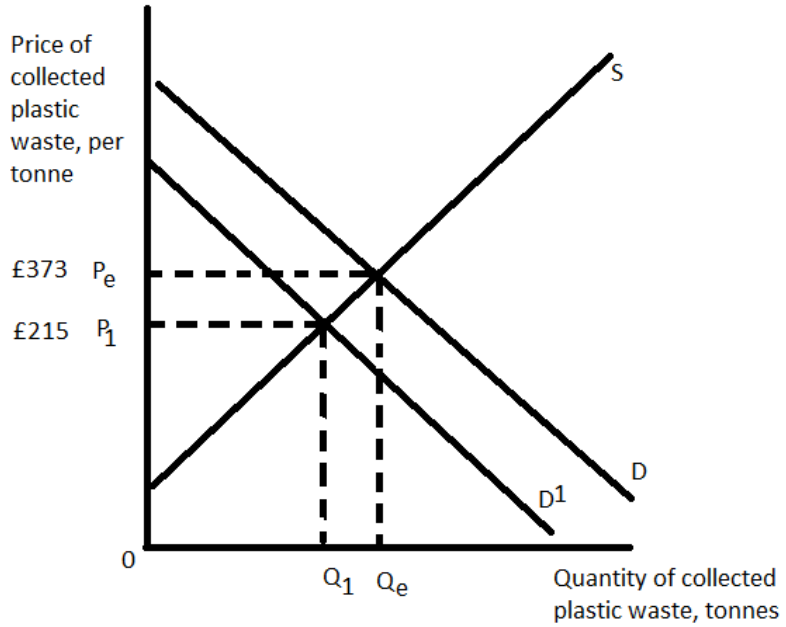
Knowledge
1 mark for defining diminishing marginal utility / marginal utility
• Diminishing marginal utility is where as a person increases consumption of a product, there is a decline in the marginal utility that person derives from consuming each additional unit of that product
• Marginal utility is the change in utility after an increase in consumption of a good (1)

Application
1 mark for the following table completed, at least showing where diminishing marginal utility occurs
<table>
<tr><th>Number of drinks</th><th>Total utility</th><th>Marginal utility</th></tr>
<tr><td>1</td><td>15</td><td>-</td></tr>
<tr><td>2</td><td>32</td><td>17</td></tr>
<tr><td>3</td><td>52</td><td>20</td></tr>
<tr><td>4</td><td>73</td><td>21</td></tr>
<tr><td>5</td><td>85</td><td>12</td></tr>
<tr><td>6</td><td>90</td><td>5</td></tr>
</table>

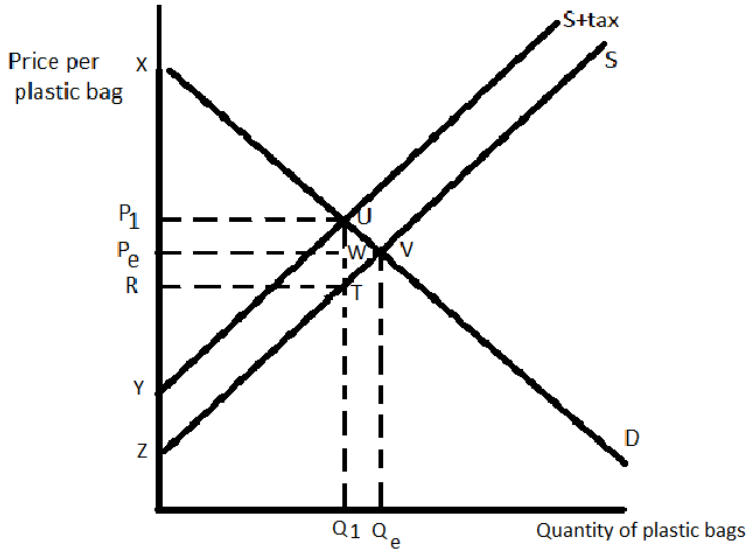
Analysis
Up to 2 marks for likely impact
• Luca experiences increasing marginal utility when increasing consumption from 1 to 2 drinks/ 2 to 3 drinks/ 3 to 4 drinks/ as the number of drinks moves from 1 to 4 the marginal utility increases from 17 to 21 (1)
• Diminishing marginal utility starts when he moves from 4 to 5 drinks (1) marginal utility falls from 21 to 12/ as consumption increases from 5 to 6 marginal utility falls from 12 to 5/ as the number of drinks moves from 4 to 6 the marginal utility decreases from 21 to 5 (1)
</td><td>(4)</td></tr>
</table>

Question	Define the term 'information gap' (Extract B, line 3). Answer	Mark
12 (a)	**Knowledge 2** Up to 2 marks for defining 'information gap', e.g.: • Where economic agents do not have full information **(1)** for example about the external costs associated with e.g. plastics/ meaning they are unable to calculate the costs and benefits associated with consumption **(1)** • Where there is a gap between the knowledge of consumers and producers **(1)** in that producers may know more about the damaging impact than consumers e.g. plastics **(1)** • Where economic agents lack information **(1)** to be able to maximise utility **(1)** • A form of market failure **(1)** where buyers and sellers do not have perfect information **(1)** • Asymmetric information is where the information held by buyers and sellers is different **(1)** meaning one has better information than the other **(1)** • Consumers and producers do not have enough information **(1)** to make a rational choice **(1)**	**(2)**

Question	Explain what is meant by 'positive economic statements'. Include **two** examples from the extracts to support your answer. Answer	Mark
12 (b)	**Knowledge 2 Application 2** **Knowledge** Up to 2 marks for definition of positive economic statements • Statements that can be supported/proved or refuted **(1)** with evidence/ facts / empirical evidence / scientifically **(1)** • Objective / not subjective **(1)** • Statements that are value free / not based on value judgements **(1)** **Application** Up to 2 marks for application to data, e.g.: • China imposing a ban on the import of plastic waste **(1)** • Prices decreased from £373 per tonne in February to £215 in December 2017 **(1)** • Plastic bags break down into smaller and smaller toxic pieces **(1)** • A plastic bag takes between 400 to 1 000 years to break down **(1)** • As it breaks down, plastic particles contaminate soil and waterways **(1)** • Plastic bags cause over 100 000 marine animal deaths every year **(1)** • Nearly 90% of the debris in our oceans is plastic **(1)** • Food can be contaminated with toxins **(1)** • The yearly consumption of plastic carrier bags in the EU is nearly 100 billion **(1)** • 92% of carrier bags are single use **(1)** • Around 3% of the marine litter in Europe is shopping bags. **(1)** • In 1994 Denmark introduced a plastic bag tax of €0.27 per bag • Before the tax 800 million bags were used in Denmark **(1)** • After the tax this dropped to 400 million **(1)** • The Danish Government found the tax on plastic bags raised just 0.03% of total tax revenue in 1995 **(1)**	**(4)**

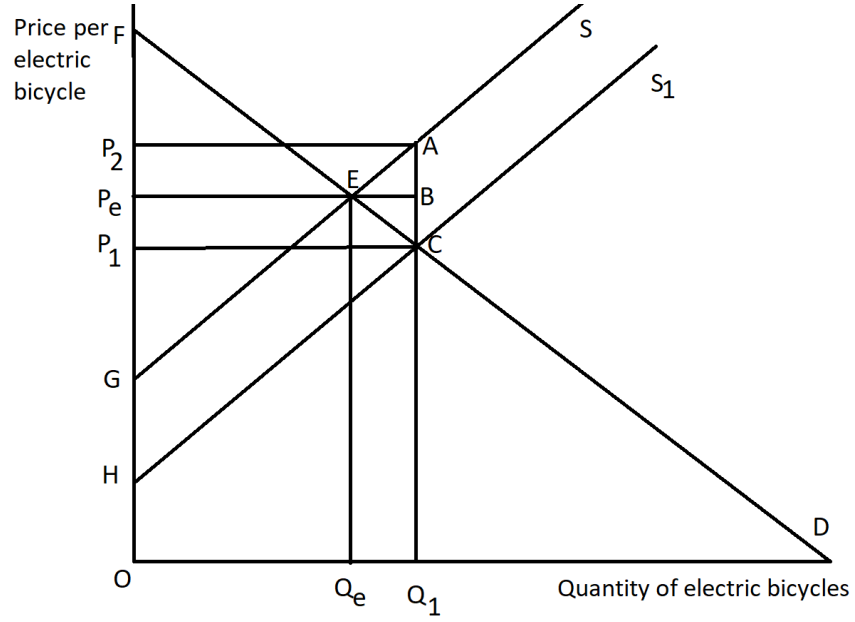
Question	Analyse **one** reason why 'the price of plastic waste material fell by more than 40%.' (Extract A, line 2). Illustrate your answer with a supply and demand diagram. Answer	Mark
12 (c)	**Knowledge 2, Application 2, Analysis 2** Quantitative skills assessed: **QS4**: Construct and interpret a range of standard graphical forms **QS9**: Interpret, apply and analyse information in written, graphical, tabular and numerical forms. **Knowledge** Up to 2 marks for the diagram showing: • Original supply, demand and equilibrium **(1)** • leftward shift in demand **(1)** **Analysis** Up to 2 marks for development of how reason(s) leads to lower prices, e.g.: • There are less companies willing to buy the material **(1)** • Meaning sellers have to accept a lower price for the goods **(1)** • There will be a contraction in supply **(1)** • Final equilibrium showing lower price **(1)** **Application** Up to 2 marks for reference to the data from Extract A: • The price falls from £373 to £215 per tonne **(1)** • With China banning the import of collected waste plastic **(1)** • There are now dramatically fewer buyers for the plastic waste **(1)**  	**(6)**

Question	With reference to Extract B, examine the external costs associated with the consumption and disposal of plastic bags. Answer	Mark
12(d)	**Knowledge 2, Application 2, Analysis 2, Evaluation 2** **Knowledge** Up to 2 marks for e.g.: • Definition of external costs: where costs are incurred by third parties **(1)** not included in the price mechanism **(1)** • The market ignores these costs and leads to an overconsumption of plastic **(1)** • The market price is below the socially optimal price **(1)** • External costs are an example of market failure **(1)** **Analysis & Application** 2 marks for each linked explanation of external costs, up to a maximum of 4 marks e.g.: • The contamination of soil may affect farmers who find they have a poor yield from the crops they grow or find it is contaminated/leading to lower revenues and profits **(1+1)** • The deaths of 100,000 marine animals reduce the supply available to the fishing industry and has negative impacts on the ecosystem **(1+1)** • 90% of debris is plastic and this may harm sea creatures who mistake it for food or get trapped in it **(1+1)** • Human health may be affected by the contamination of food with toxins. Healthcare providers may need to treat people affected by contamination costing tax payers where healthcare is provided by the state **(1+1)** **Evaluation** Up to 2 marks for evaluative comments, e.g.: • Plastic bags benefit consumers as it makes transporting goods more hygienic /convenient/ protects products from damage **(1+1)** • It is difficult to place a value on external costs making it hard to quantify the size of external costs **(1+1)** • There is a significant external cost here with 100 000 marine animals being affected/ makes up 90% of debris in oceans **(1+1)** • The problems may not be identified immediately and extra costs may take a long time to emerge **(1+1)** • The plastic in the oceans may not only be caused by plastic bags **(1+1)** • The source for this information may be biased presenting evidence which is less reliable or valid as they are a conservation organisation campaigning for environmental protection **(1+1)**	**(8)**

Question	With reference to Extract C, Figure 1 and Figure 2, discuss the microeconomic impact of the introduction of an indirect tax on plastic bags. Illustrate your answer with an appropriate diagram. Indicative content
12(e)	**Indicative content guidance** Answers must be credited by using the level descriptors (below) in line with the general marking guidance. The indicative content below exemplifies some of the points that candidates may make but this does not imply that any of these must be included. Other relevant points must also be credited. **Quantitative skills assessed** **QS4**: Construct and interpret a range of standard graphical forms **QS9**: Interpret, apply and analyse information in written, graphical, tabular and numerical forms. **Knowledge, Application and Analysis (8 marks) – indicative content** • Definition of 'indirect tax' – expenditure tax • Indirect tax is €0.04 per plastic bag in Greece and €0.27 in Denmark • This is a specific tax: a fixed amount for each unit • Increases the cost of production for retailers • Diagram showing the indirect tax for plastic bags  Accept diagram showing external costs with tax imposed • Originally the price paid by consumers was P_e but increases to P_1 • Quantity of plastic bags decreases from Q_e to Q_1 • In January 2018 there was a 75% decrease in use of plastic bags compared to January 2017 • Reduces consumption of plastic bags closer to EU target of 90 bags per person per year • Consumption is down from approximately 240 plastic bags per person per year • Consumer surplus decreases from P_eVX to P_1UX. A change/ decrease of P_eP_1UV - consumers suffer

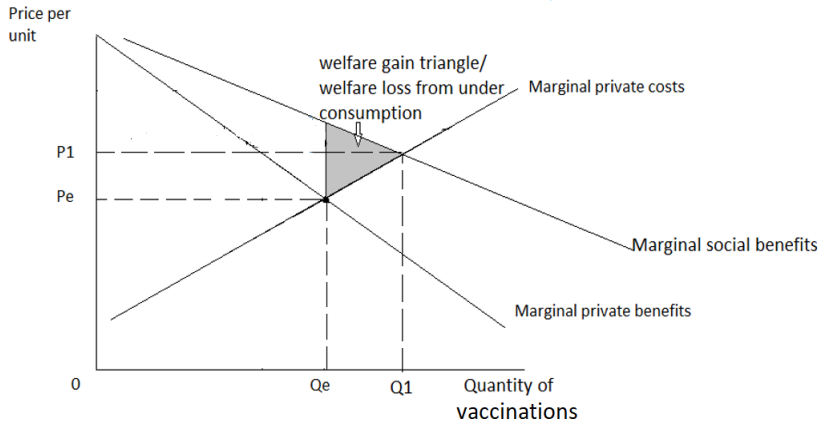
	• Producer surplus decreases from P_eVZ to RTZ • Government tax revenue P_1RTU • Producer incidence P_eRTW • Consumer incidence P_eP_1UW • Government raises €0.04 per bag • Profits generated by plastic bag manufacturers and retailers may fall • Total revenue earned by plastic bag firms may fall • Employment in plastic bag manufacturers may fall • EU uses 100 billion plastic carrier bags per year- tax contributes to reducing this/ helps reduce marine litter (3%) • Reducing external costs caused by plastic bags • Reusable shopping bag sales increased 5 000% in Greece helping to increase revenue, producer surplus • Creates market for multiple use plastic bags which are not used according to Figure 2	
Level	Mark	Descriptor
	0	No rewardable material
Level 1	1–3	Displays isolated, superficial or imprecise knowledge and understanding of economic terms, principles, concepts, theories and models. Use of generic material or irrelevant information or inappropriate examples. Descriptive approach, which has no chains of reasoning.
Level 2	4–6	Displays elements of knowledge and understanding of economic terms, principles, concepts, theories and models. Ability to apply knowledge and understanding to some elements of the question. Some evidence and contextual references are evident in the answer. Chains of reasoning in terms of cause and/or consequence are evident but they may not be developed fully or some stages are omitted.
Level 3	7–8	Demonstrates accurate and precise knowledge and understanding of economic terms, principles, concepts, theories and models. Ability to link knowledge and understanding in context using relevant examples which are fully integrated to address the broad elements of the question. Analysis is clear, coherent, relevant and focused. The answer demonstrates logical and multi-stage chains of reasoning in terms of cause and/or consequence.
	Evaluation (6 marks) – indicative content • Magnitude of tax. Just €0.04 in Greece so may not have a large impact • The €0.04 tax resulted in 75% decrease in use of plastic bags • Denmark the tax was €0.27 causing reduction from 800 million to 400 million- lower tax may not have such an impact • Denmark only raised 0.03% of total tax revenue in 1994 from the plastic bag tax and 0.02% of tax revenue in 2014 with a higher tax, with just €0.04 tax likely even smaller impact/ Denmark only raised €24 547 in 2014 • Measurement – it is hard to measure the size of external costs to decide what the ideal indirect tax should be • May create government failure as reusable bags may be damaging/ resources wasted in administration of tax • May be better to decrease consumption by giving information on the external	

	costs associated with plastic bags • Incidence of tax depends on the price elasticity of demand. If inelastic consumer incidence will be bigger/ if elastic producer incidence will be higher • In Denmark consumers at supermarkets seem to have more inelastic demand hence charged (i.e. consumer pays) whereas clothing shops consumers have more elastic demand and are not charged for bags (i.e. producer pays) • PED might change over time and / or if the tax is increased	
Level	Mark	Descriptor
	0	No rewardable material.
Level 1	1–2	Identification of generic evaluative comments. No supporting evidence/reference to context. No evidence of a logical chain of reasoning.
Level 2	3–4	Evidence of evaluation of alternative approaches. Some supporting evidence/reference to context. Evaluation is supported by a partially-developed chain of reasoning.
Level 3	5–6	Evaluation recognises different viewpoints and/or is critical of the evidence. Appropriate reference to evidence/context. Evaluation is supported by a logical chain of reasoning.

Question	Evaluate the economic effects of subsidising electric bicycles. Indicative content
13	**Indicative content guidance** Answers must be credited by using the level descriptors (below) in line with the general marking guidance. The indicative content below exemplifies some of the points that candidates may make, but this does not imply that any of these must be included. Other relevant points must also be credited. **Knowledge, application and analysis (12 marks) – indicative content** • Definition of 'subsidy' – cash grant paid by the Government • Subsidy is €400 • Reduces the cost of production for electric bicycle manufacturers • Diagram showing the subsidy for electric bicycle manufacturers  • Originally the price paid by consumers was P_e but decreases to P_1 • Quantity of electric bicycles increases from Q_e to Q_1 • Consumer surplus increases from P_eEF to P_1CF. A change/ increase of P_eP_1CE - consumers benefit • Producer surplus increases from P_eEG to P_1CH • Government spending ACP_1P_2 • Consumer incidence BCP_1P_e • Producer incidence ABP_eP_2 • Profits generated by electric bicycle manufacturers may rise • Employment in electric bicycle manufacturers may rise • Encourage healthy lifestyles- cycling • Reduce the reliance on motor vehicles • Likely to lead to lower demand, price, quantity, producer surplus for motor vehicles • Leads to lower emissions and external costs associated with motor vehicles

Level	Mark	Descriptor
	0	No rewardable material.
Level 1	1–3	Displays isolated, superficial or imprecise knowledge and understanding of economic terms, principles, concepts, theories and models. Use of generic material or irrelevant information or inappropriate examples. Descriptive approach which has no chains of reasoning.
Level 2	4–6	Displays elements of knowledge and understanding of economic terms, principles, concepts, theories and models. Limited application of knowledge and understanding to economic problems in context. A narrow response or superficial, only two-stage chains of reasoning in terms of cause and/or consequence.
Level 3	7–9	Demonstrates accurate knowledge and understanding of economic terms, principles, concepts, theories and models. Ability to apply knowledge and understanding to some elements of the question. Some evidence and contextual references are evident in the answer. Analysis is clear and coherent. Chains of reasoning in terms of cause and/or consequence are evident but they may not be developed fully or some stages are omitted.
Level 4	10–12	Demonstrates accurate and precise knowledge and understanding of economic terms, principles, concepts, theories and models. Ability to link knowledge and understanding in context, using appropriate examples which are fully integrated to address the broad elements of the question. Analysis is clear, coherent, relevant and focused. The answer demonstrates logical and multi-stage chains of reasoning in terms of cause and/or consequence.
	Evaluation (8 marks) – indicative content • Size of subsidy is important. €400 is likely to cover most of the production costs so likely to have a large impact • Measurement – it is hard to measure what the ideal subsidy should be • May create government failure as over-investment in electric bicycles and resources wasted • Subsidy may make electric bicycle manufacturers- inefficient as reliant/ dependent on subsidy • May be better to increase consumption by giving information on the costs associated with motor vehicles and benefits of electric cycling. • Time frame – people may take a long time to adjust their behaviour • Opportunity costs - less funds available for other public services • Better to support subsidies of alternative fuel cars	
Level	Mark	Descriptor
	0	No rewardable material.
Level 1	1–3	Identification of generic evaluative comments. No supporting evidence/reference to context. No evidence of a logical chain of reasoning.

Level 2	4–6	Evidence of evaluation of alternative approaches. Some supporting evidence/reference to context. Evaluation is supported by a partially-developed chain of reasoning.
Level 3	7–8	Evaluation recognises different viewpoints and/or is critical of the evidence, leading to an informed judgement. Appropriate reference to evidence/context. Evaluation is supported by a logical chain of reasoning.

Question	Evaluate the private benefits and external benefits of children receiving the measles vaccination. Indicative content
14	**Indicative content guidance** Answers must be credited by using the level descriptors (below) in line with the general marking guidance. The indicative content below exemplifies some of the points that candidates may make but this does not imply that any of these must be included. Other relevant points must also be credited. **Knowledge, application and analysis (12 marks) – indicative content** • Vaccination protects against contraction of measles • Private benefits- benefits accrued to the person receiving the vaccine • Reduced risk of measles/ reduced risk of death/ reduced chance of absence from work and lost earnings • External benefits- benefits to third parties • External benefits diagram may be offered  • Reference to market equilibrium, social optimum and welfare gain • The individual receiving the vaccination will not contract measles and reduces the risk of people they know contracting the disease • With 42% receiving the vaccination the chances of getting measles increases as you come across more people without protection. • This led to 2 381 of measles cases in first 10 months of 2017 up from 102 in 2016. • By increasing the number vaccinated you can lower number of measle cases • Reduce the number of hospital admittances and costs to health services • Employers will benefit if less employees get measles as less impact on staff absence- parents of children who are ill also miss time at work • Private benefits of those administering vaccinations- e.g. revenues, profit

	Mark	Descriptor
	0	No rewardable material.
Level 1	1–3	Displays isolated, superficial or imprecise knowledge and understanding of economic terms, principles, concepts, theories and models. Use of generic material or irrelevant information or inappropriate

		examples. Descriptive approach, which has no chains of reasoning.
Level 2	4–6	Displays elements of knowledge and understanding of economic terms, principles, concepts, theories and models. Limited application of knowledge and understanding to economic problems in context. A narrow response or superficial, only two-stage chains of reasoning in terms of cause and/or consequence.
Level 3	7–9	Demonstrates accurate knowledge and understanding of economic terms, principles, concepts, theories and models. Ability to apply knowledge and understanding to some elements of the question. Some evidence and contextual references are evident in the answer. Analysis is clear and coherent. Chains of reasoning in terms of cause and/or consequence are evident but they may not be developed fully or some stages are omitted.
Level 4	10–12	Demonstrates accurate and precise knowledge and understanding of economic terms, principles, concepts, theories and models. Ability to link knowledge and understanding in context using appropriate examples which are fully integrated to address the broad elements of the question. Analysis is clear, coherent, relevant and focused. The answer demonstrates logical and multi-stage chains of reasoning in terms of cause and/or consequence.
	Evaluation (8 marks) – indicative content • Magnitude – it depends on how many are vaccinated- 97% as in 2007 would reduce measles cases dramatically • Time frame – it will take time for the vaccinations to be administered and take time to reduce number of cases • Opportunity costs - spending on this vaccine reduces the amount available for other vaccines/ health services • Can we guarantee success of the vaccination? / side effects of vaccination • Private benefits may be insignificant if measles has a limited impact on an individual's health • Difficult to quantify and give a monetary value to external/private benefits	
Level	Mark	Descriptor
	0	No rewardable material.
Level 1	1–3	Identification of generic evaluative comments. No supporting evidence/reference to context. No evidence of a logical chain of reasoning.
Level 2	4–6	Evidence of evaluation of alternative approaches. Some supporting evidence/reference to context. Evaluation is supported by a partially-developed chain of reasoning.
Level 3	7–8	Evaluation recognises different viewpoints and/or is critical of the evidence, leading to an informed judgement. Appropriate reference to evidence/context. Evaluation is supported by a logical chain of reasoning.