4	**QS4**: Construct and interpret a range of standard graphical forms **QS9**: Interpret, apply and analyse information in written, graphical, tabular and numerical forms	**The only correct answer is C** **A** is not correct because point Z is obtainable because it is inside the PPF	**(1)**
		B is not correct because at point Y there are fewer capital goods so the growth rate will be slower. **D** is not correct because the movement to Y results in a gain of 25 consumer goods	

2	–	**The only correct answer is C** **A** is not correct because is consumers were good at computation they would calculate that they could save 20% and switch **B** is not correct because if people aimed to maximise utility they would switch as the money they have could be spent on other goods **D** is not correct because if consumers felt undervalued by their current provider they would be more likely to look for a provider that does value them	**(1)**

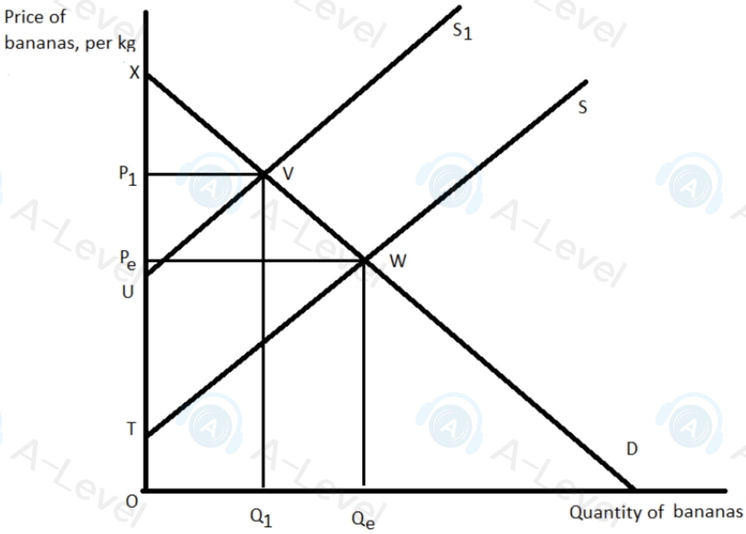
4	**QS6**: Calculate total revenue **QS9**: Interpret, apply and analyse information in written, graphical, tabular and numerical forms	**The only correct answer is A-** Total revenue will rise by €13 500 **B** is not correct because €58 500 is the total revenue after the price is reduced to €1.30 **C** is not correct because revenue will rise as demand is elastic in this section of the demand curve	**(1)**
		D is not correct because €45 000 is the total revenue before the price rise	

1	–	D	**(1)**

6	**QS4**: Construct and interpret a range of standard graphical forms **QS8**: Make calculations of elasticity and interpret the result **QS9**: Interpret, apply and analyse information in written, graphical, tabular and numerical forms	**The only correct answer is A** **B** is not correct because an increase in the price of one complement would result in a reduction in the quantity demanded for the other complement **C** is not correct because a change in the price of one good causes a change in demand for the other good **D** is not correct because there is no information on income	**(1)**

5	**QS9**: Interpret, apply and analyse information in written, graphical, tabular and numerical forms	**The only correct answer is A** ***B*** *is not correct as supply exceeds demand* ***C*** *is not correct as supply extends from* Q_e *to* Q_2 ***D*** *is not correct as demand contracts from* Q_e *to* Q_1	**(1)**

Question Number	In September 2017, Centrica increased the price of gas and electricity by 12.5%. Before the price rise Centrica had 12 800 000 customers but this fell by 800 000 after the price increase. Ceteris paribus, calculate the price elasticity of demand for gas and electricity from Centrica. Show your workings. Answer	Mark
10	**Knowledge 1, Application 3** Quantitative skills assessed: **QS8:** Make and interpret calculations of elasticity. **Knowledge** • 1 mark for the formula for price elasticity of demand: $\frac{\text{\% change in quantity demanded}}{\text{\% change in price}}$ **(1)** **OR** • 1 mark for identifying that the good is relatively price inelastic. • The demand for Centrica's gas and electricity is price inelastic because the percentage change in price is greater than the percentage change in quantity demanded. **Application** Up to 3 marks for calculations: • Change in quantity ÷ original quantity -800 000 ÷ 12 800 000 x 100= -6.25% **(1)** • % Change in quantity ÷ % change in price -6.25%/12.5% **(1)** = -0.5 **(1)** **NB: if correct answer (-0.5) is given, award full marks regardless of working**	**(4)**

Question	Between January 2020 and May 2020 the price of bananas charged by retailers in the USA increased from \$1.17 to \$1.30 per kg. This was mainly caused by increased costs of transportation from banana growers to markets in North America. Explain the likely impact of this change in price on consumer surplus. Illustrate your answer with a diagram. **Answer**	**Mark**
11	**Knowledge 1, Application 1, Analysis 2** Quantitative skills assessed: **QS4**: Construct and interpret a range of standard graphical forms **Knowledge** 1 mark for defining consumer surplus • Consumer surplus is the difference between the price which consumers are willing to pay and the market price/gap between the equilibrium price and the demand curve **(1)** **Application** 1 mark for the following diagram, showing the correct shift in supply  **Analysis** Up to 2 marks for likely impact on consumer surplus • Consumer surplus is originally P_eWX **(1)** • Consumer surplus decreases **(1)** to P_1VX **(1)** • Consumer surplus decreases **(1)** by P_eP_1VW **(1)**	**(4)**

Question	With reference to Munich's housing market, explain what is meant by a 'market bubble'. **Answer**	Mark
8	**Knowledge 2, Application 2** Quantitative skills assessed: **QS9**: Interpret, apply and analyse information in written, graphical, tabular and numerical forms. **Knowledge** 2 marks for understanding 'market bubbles' • A bubble is created by speculation/consumers buying in the hope of selling at higher price/expectations of further price increases **(1)** • To a level which is overinflated/above expected prices/increase to extreme levels/increasing constantly **(1)** • Price is unsustainable/price is higher than true/real value **(1)** • A market bubble is an examples of a market failure **(1)** **Application** 2 marks for applying to Munich's housing market e.g.: • Munich has the highest risk of a housing market bubble **(1)** • Between 2010 and 2020 the average price of a house more than doubled **(1)** • House prices may be at risk of falling/the housing price bubble may be at risk of bursting/demand may fall when potential buyers can no longer borrow money/loss of confidence about future price rises **(1)**	**(4)**

Question	With reference to the Maldives, explain the difference between 'market failure' and 'government failure'. **Answer**	Mark
8	**Knowledge 2, Application 2** Quantitative skills assessed: **QS9**: Interpret, apply and analyse information in written, graphical, tabular and numerical forms. **Knowledge** 1 mark for understanding of 'market failure' • Where the price mechanism/ supply and demand/ buyers and sellers lead to an inefficient allocation of resources/ misallocation of resources **(1)** 1 mark for understanding of 'government failure' • Where government intervention leads to a net welfare loss/ a worse allocation of resources **(1)** **Application** 1 mark for reference to data on market failure • Market failure – under-provision of public goods/ under-investment in flood defences **(1)** 1 mark for reference to data on government failure • Government failure - excessive administrative costs/required to complete extensive paperwork **(1)**	**(4)**

Question | | **Mark**

Country	External cost of pollution per capita ($)
Germany	950
USA	1200
South Africa	1300
Brazil	1500

With reference to the table, explain one reason why the external costs of pollution might be different between these countries.

Answer

9

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 definition of external costs:

- Negative impact on third parties/where social costs exceed private costs **(1)**

Application

1 mark for reference to data:

- External cost of pollution per capita:
  USA $1 200/Germany $950/Brazil $1 500/
  South Africa $1 300 **(1)**

Analysis

Up to 2 marks for linked analysis e.g.:

- Greater use of green energy in Germany than in South Africa **(1)** so less use of fossil fuels **(1)**
- Higher income/GDP in USA than in South Africa **(1)** so greater ability to spend more on home/business insulation **(1)**

(4)

		• Higher indirect taxes in Germany than in Brazil **(1)** reducing supply from polluting firms in Germany **(1)** • EU tradable pollution permit scheme **(1)** reducing the production of carbon emissions in Germany **(1)** • Higher government subsidies to promote the use of green energy/electric cars in USA than in Brazil **(1)** so more incentive for consumers and businesses to use green energy/buy electric cars **(1)** • Difference in government policies to combat pollution **(1)** help disincentivise firms/ individuals from polluting **(1)** • Stricter environmental regulations **(1)** reducing the production of carbon emissions in Germany **(1)**	

Question Number	In 2019, the price of a litre of diesel was 65% higher in Thailand than in Malaysia. The price difference was because of higher taxation on diesel in Thailand. This led to illegal smuggling. For example, on one night, Thai authorities seized 300 000 litres of diesel that was illegally imported from Malaysia. Evaluate possible causes of government failure in a market of your choice. 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** • Government failure– where government intervention leads to a net welfare loss Possible causes of government failure include: • Information gaps- where the government lacks perfect information and sets the wrong level of regulation/taxation/subsidy • Lack of incentives- where the policy fails to create the incentives for firms and consumers to change their behaviour appropriately • Unintended consequences- where a policy leads to an outcome that was not anticipated, this could include smuggling • Excessive administrative costs- where the costs of administering the regulation or tax are greater than any benefit of the government intervention • Moral hazard- where the costs of an action are likely to be experienced by someone else causing riskier actions

	Possible responses linked to the stem • The 65% higher price in Thailand gives those in Thailand the incentive to travel to Malaysia to buy cheaper diesel • Even taking in to account the costs associated with travelling the significant difference in price means this activity can be profitable • The returns may be so large that smugglers are willing to take the risk of being caught • 300 000 litres in one night suggests that the smuggling is commonplace • Diesel will have the same properties in both countries so the appearance and smell will be identical making it difficult to discover its origins • This makes it easier to smuggle undetected

		• If the value of smuggling if greater than the tax revenue earned then this is an example of government failure • Smuggled diesel results in a loss of tax revenue to the Government • If the smuggling funds organised crime then this could be a further unintended consequence **NB Maximum Level 3 if candidate does not refer to at least two causes of government failure related to a market of their choice**
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 Evaluation should be rewarded when linked to the relevant cause of government failure • Information gaps • Lack of incentives • Excessive administrative costs • Moral hazard Evaluation linked to stem • Measurement problem- difficult to value the level of smuggling as it goes unrecorded • Magnitude- sizeable tax so likely to have a large impact on generating smuggling • Depends on efforts to detect • Depends on punishment as to whether it continues • Possible rewards of smuggling may far exceed any penalties • Time- the current efforts to detect smuggling may in time reduce the unintended consequence • Malaysian sellers of diesel will earn more revenue and the Malaysian Government more tax revenue

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.