1.25 Asymmetric Information, Merit Goods and Demerit Goods

Total Marks

AQA 7136 · Calculators not allowed · about 55 minutes · Write-in edition

Name: _____ Date: ____ / ____ / _____

Answer all questions. Full sentences are required for questions worth 4 marks or more. Time guidance: 55 minutes total.

1 Define asymmetric information as it applies to markets for goods and services, naming which party typically has more information.

(Total for Question 1 is 2 marks)

2 Define adverse selection in the context of insurance markets and give the key causal mechanism in one sentence.

(Total for Question 2 is 2 marks)

3 Define moral hazard in financial or insurance markets and give a brief example involving car insurance.

(Total for Question 3 is 2 marks)

4 Define a merit good and explain in one line why markets may under-consume it, using education as the example.

(Total for Question 4 is 2 marks)

5 Define a demerit good and give one reason why it might be over-consumed, with tobacco as an example.

(Total for Question 5 is 2 marks)

6 State two government policy instruments that could be used to correct under-consumption of a merit good such as vaccination, naming each instrument.

(Total for Question 6 is 2 marks)

7 Explain why imperfect information might lead to the overconsumption of a demerit good such as gambling. Give two separate reasons and one brief evaluative comment.

(Total for Question 7 is 3 marks)

8 Distinguish between the private benefits and the social benefits of education, and give one numerical or qualitative example to illustrate the difference.

(Total for Question 8 is 3 marks)

9 Explain, in two separate points, how adverse selection and moral hazard differ as forms of information failure, using insurance markets as the context.

(Total for Question 9 is 3 marks)

10 Explain with an example how signalling can reduce adverse selection in a market, for instance how degree certificates signal ability in the graduate labour market.

(Total for Question 10 is 2 marks)

11 Explain how screening by insurers can reduce adverse selection, using the example of health questionnaires or medical checks before offering cover.

(Total for Question 11 is 2 marks)

12 Analyse how imperfect information might cause the market to fail for a named merit good, vaccinations. In your answer, consider the mechanisms of information failure, the consequences for allocation of resources, and possible limits to market-based or policy solutions.

(Total for Question 12 is 12 marks)

Mark scheme · 1.25 Asymmetric Information, Merit Goods and Demerit Goods

Question 1

a situation where one party to a transaction has more or better information than the other party **B1**

typically sellers have more information about product quality, or buyers about their own risk, depending on the market **B1**

Answer: Asymmetric information is where one side of a market transaction has better information than the other; for example sellers often know more about product quality than buyers.

Question 2

adverse selection occurs when higher risk individuals are more likely to buy insurance than lower risk individuals **B1**

the causal mechanism is that insurers cannot perfectly observe buyers' risk before the contract, so premiums rise and low-risk buyers withdraw **B1**

Answer: Adverse selection is when higher-risk individuals are more likely to purchase insurance because insurers cannot identify risk perfectly, which can raise premiums and drive out low-risk customers.

Question 3

moral hazard is when a person changes behaviour after obtaining insurance or a contract because they no longer bear the full cost of risky actions **B1**

example: a driver with comprehensive car insurance driving less carefully because repairs are covered **B1**

Answer: Moral hazard is when insured individuals take greater risks because they are protected from the full cost; for example, a driver may be less careful after buying comprehensive car insurance.

Question 4

a merit good is one that has greater long-term private and social benefits than consumers recognise **B1**

markets under-consume education because individuals may underestimate future benefits or face liquidity constraints, so private demand is below the socially desirable level **B1**

Answer: A merit good yields greater private and social benefits than consumers appreciate; for example education is under-consumed because people may undervalue long-term returns or lack funds to invest.

Question 5

a demerit good is consumed more than is socially desirable because consumers under-estimate its private costs or ignore negative externalities **B1**

example: tobacco may be over-consumed because consumers under-estimate health risks or suffer addiction, reducing rational decision-making **B1**

Answer: A demerit good is over-consumed because people under-estimate private costs or ignore harms; tobacco is over-consumed since users may underestimate health risks or be addicted.

Question 6

subsidies to reduce the private price, increasing consumption **B1**

information campaigns or mandatory vaccination policies to increase private perceived benefits or uptake **B1**

Answer: Examples: subsidies to lower cost; information campaigns or mandates to raise uptake.

Question 7

consumers may under-estimate private costs or over-estimate private benefits because of imperfect information, for example overestimating the chance of winning in gambling **M1**

this leads to higher private demand than if probabilities and long-term losses were fully understood, causing overconsumption relative to the social optimum **A1**

evaluation: addiction and behavioural biases reduce the effectiveness of information alone, so information campaigns may be insufficient without complementary policies **A1**

Answer: Imperfect information, such as overestimating winning odds, raises private demand for gambling above the socially desirable level; however, addiction and biases mean information alone may not correct overconsumption.

Question 8

private benefits are gains accruing to the individual, such as higher wages or better job prospects **B1**

social benefits include wider gains to society, e.g. higher productivity, lower crime, and positive externalities from a more skilled workforce **B1**

example: an individual may gain a 20% higher lifetime income from a degree (private benefit), while society benefits from higher tax revenues and reduced unemployment (social benefits) **B1**

Answer: Private benefits are the individual's higher earnings and opportunities; social benefits include wider productivity and social gains. For instance, a graduate may earn 20% more (private gain), while society gains higher tax receipts and lower crime rates (social gains).

Question 9

adverse selection occurs BEFORE a transaction, when hidden characteristics lead to a disproportionate number of high-risk buyers or low-quality goods entering the market **B1**

moral hazard occurs AFTER a transaction, when the insured or contracted party changes behaviour because they no longer face the full consequences of risk **B1**

adverse selection is about hidden information about inherent characteristics, moral hazard is about hidden actions or behaviour once a contract is in force **B1**

Answer: Adverse selection occurs before a contract, when those with hidden high risk are more likely to buy insurance; moral hazard occurs after a contract, when insured people take more risks because they do not bear full costs. The former is hidden characteristics, the latter hidden actions.

Question 10

signalling is an action by the informed party to reveal private information, e.g. obtaining a degree signals higher ability or productivity **B1**

this reduces adverse selection because employers use the signal to differentiate higher-ability candidates from lower-ability ones, improving the match in the market **B1**

Answer: A degree acts as a signal of ability that helps employers distinguish higher-productivity graduates, reducing adverse selection by revealing private information.

Question 11

screening is where the uninformed party takes actions to elicit information, e.g. insurers require health questionnaires or medical checks **B1**

this reduces adverse selection because insurers can better price risk or refuse very high risks, improving the risk pool and preventing premiums from rising excessively **B1**

Answer: Insurers screen applicants with questionnaires or checks to reveal risk characteristics, enabling better pricing or exclusion and so reducing adverse selection.

Question 12

Level 1 Basic identification of imperfect information and a simple link to under-consumption or a single policy. Limited development and little use of economic reasoning or real-world connection. **1-4**

Level 2 Clear explanation of how imperfect information about vaccinations reduces private demand and creates a divergence between private and social benefits, with discussion of the resulting inefficient allocation and some evaluation of policy responses. **5-8**

Level 3 Sophisticated analysis linking information failure to measurable market failure for vaccinations, including mechanisms (e.g. under-estimation of herd immunity benefits, present bias), effects on equilibrium quantity and welfare, and balanced evaluation of policy tools and their limitations. **9-12**

Indicative content:

- Name the merit good: vaccinations, which produce private protection and positive externalities via herd immunity
- Explain imperfect information: individuals may underestimate long-term benefits, misunderstand small probabilities of adverse effects, or be unaware of herd immunity benefits to others
- Mechanisms: uncertainty about vaccine safety or effectiveness reduces perceived private benefit, present bias leads to undervaluing future health gains, and information problems shift private demand left of the social demand curve
- Allocation consequence: market equilibrium quantity is below the socially optimal quantity, producing a deadweight loss and higher risk of disease outbreaks
- Distributional/behavioural aspects: vaccine hesitancy can be concentrated in particular groups, increasing localised outbreaks and social costs
- Policy responses: subsidies or free provision to remove price barriers, information campaigns to correct misperceptions, mandates or conditional requirements (e.g. school-entry vaccination), and provision by trusted public health bodies to signal safety
- Evaluation of policies: information campaigns may be limited by entrenched beliefs and misinformation; subsidies improve uptake but may not address hesitancy; mandates increase coverage but raise ethical and political objections and may have enforcement costs
- Second-best considerations: combination policies (information plus subsidies or targeted mandates) can be more effective; consider timing and costs, and potential unintended consequences such as reduced trust if policies are heavy-handed
- Consider magnitude and externalities: the size of the positive externality (how contagious the disease is) affects the case for intervention; when herd immunity thresholds are high, the welfare gain from reaching the social optimum is larger
- Conclude with a balanced judgement on why imperfect information causes market failure for vaccinations and how policy can mitigate but not always fully eliminate the problem