



ECO.MIC22 Asymmetric Information, Merit Goods and Demerit Goods

AQA 7136 · Calculators not allowed · about 90 minutes

Total Marks

Name: _____ Date: ____ / ____ / ____

Answer all questions. Full sentences are required for questions worth 4 marks or more. Time guidance: 90 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** 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 6 is 3 marks)

- 7** 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 7 is 2 marks)

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

(Total for Question 8 is 2 marks)

9 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 9 is 2 marks)

10 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 10 is 3 marks)

11 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 11 is 3 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 · ECO.MIC22 Asymmetric Information, Merit Goods and Demerit Goods

Question 1

- **B1** 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
- **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

- **B1** 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
- **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

- **B1** 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
- **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

- **B1** 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
- **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

- **B1** 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
- **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

- **B1** 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
- **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 7

- **B1** 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
- **Answer: A degree acts as a signal of ability that helps employers distinguish higher-productivity graduates, reducing adverse selection by revealing private information.**

Question 8

- **B1** 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
- **Answer: Insurers screen applicants with questionnaires or checks to reveal risk characteristics, enabling better pricing or exclusion and so reducing adverse selection.**

Question 9

- **B1** subsidies to reduce the private price, increasing consumption
- **B1** information campaigns or mandatory vaccination policies to increase private perceived benefits or uptake
- **Answer: Examples: subsidies to lower cost; information campaigns or mandates to raise uptake.**

Question 10

- **M1** consumers may under-estimate private costs or over-estimate private benefits because of imperfect information, for example overestimating the chance of winning in gambling
- **A1** 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
- **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 11

- **B1** 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)
- **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 12

- **Level 1** (1-4): 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.
- **Level 2** (5-8): 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.
- **Level 3** (9-12): 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.
- **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