



EC1002 Introduction to Economics

Candidates should answer Sections A, B and C.

Section A of this examination consists of 10 Multiple Choice Questions which should be answered online. You should attempt to answer ALL the questions. Each question has four possible answers (A-D). There is only one correct answer to each of the questions. The maximum mark for this section is 40. The expected time/effort to answer Section A is approximately 1 hour.

Section B (30 marks): Candidates must answer ONE of TWO questions on microeconomics. It is essential that candidates explain their answers.

Section C (30 marks): Candidates must answer ONE of TWO questions on macroeconomics. It is essential that candidates explain their answers. You may use *any* calculator for any appropriate calculations. Credit will only be given if all workings are shown.

Please see questions on following page

SECTION A: Multiple Choice Questions

Question 1

Siying works as a wedding photographer and has been asked to take pictures of a wedding in Singapore. If she accepts the contract her commission will be £750. It costs £450 for her to reach the location, but the groom would reimburse her travel expenses. If she decides not to accept, she is going to direct a photoshoot for a local band and be paid £400. Given this information what should Siying do?

- a) Siying's opportunity cost if she accepts the wedding photoshoot is £400 so she should go to Singapore and take pictures at the wedding.
- b) Siying's opportunity cost if she accepts the wedding photoshoot is £300 so she should work with the local band.
- c) Siying's opportunity cost if she accepts the photoshoot with the local band is £300 so she should work with the local band.
- d) Siying's opportunity cost if she accepts the photoshoot with the local band is £400 so she should go to Singapore and take pictures at the wedding.

Question 2

Figure 1 shows the average total cost and marginal cost of a firm that produces output q . What can we infer from the figure?

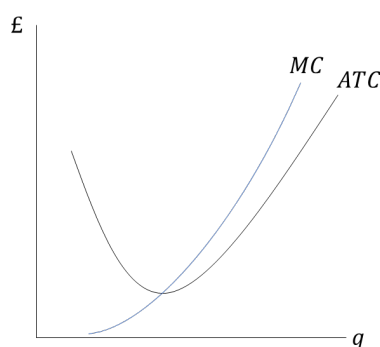


Figure 1

- a) The firm will produce at the intersection between the marginal cost curve and the average total cost curve.
- b) The firm incurs no fixed cost.
- c) The firm incurs a positive fixed cost.
- d) The firm experiences increasing returns to scale at any level of output.

Question 3

In which way are the Grant Museum of Zoology (a small London museum that does not charge for entrance), and the atmosphere similar?

- a) They are both excludable.
- b) They are both non-excludable.
- c) They are both rival.
- d) They are both non-rival.

Question 4

Which of the following statements is **NOT** correct when the labour market has a monopsony?

- a) The labour supply curve is upward sloping.
- b) The amount of workers hired in a monopsony is lower than in a competitive market.
- c) A monopsonist wishing to hire an extra worker will need to pay a higher wage to each of their workers.
- d) Monopsonies are more likely to arise in big cities than in small towns.

Question 5

Harry and Ron are flat mates and each week they choose whether to clean the flat or not. This week Ron has invited Hermione for dinner, whereas Harry has an important match coming up so won't be home much. Their payoffs from cleaning (or not) the flat this week are as follows:

Ron/Harry	Clean	Don't clean
Clean	14,5	7,6
Don't clean	8,8	4,6

Which of the following statements is correct?

- a) The pure strategy Nash equilibria are (clean, clean) and (don't clean, don't clean).
- b) The unique pure strategy Nash equilibrium is (clean, clean).
- c) The pure strategy Nash equilibria are (clean, don't clean) and (don't clean, don't clean).
- d) The unique pure strategy Nash equilibrium is (clean, don't clean).

Question 6

Paying efficiency wages does not increase a firm's profit by:

- a) Decreasing the country's natural unemployment rate.
- b) Decreasing worker turnover and therefore decreasing hiring and training costs.
- c) Increasing workers' productivity.
- d) Lowering efficiency in the market.

Question 7

With perfect capital mobility, if inflation in the UK is forecasted to be 3% higher than in the US and interest parity holds, then:

- a) The UK will become more competitive than the US.
- b) There will be opportunities for arbitrage.
- c) There will be a depreciation of the pound with respect to the dollar.
- d) None of the above.

Question 8

Which of the following statements about the Brazilian balance of payments is correct?

- a) The current account does not measure the difference between payments for services manufactured in Brazil and exported to other countries and those manufactured in other countries and imported by Brazil.
- b) If all transactions are measured correctly the sum of the current account, capital account and financial account is zero.
- c) The sale of a Brazilian financial asset would be recorded in the capital account.
- d) The sale of Brazilian goods would be recorded in the financial account.

Question 9

Which of the following statements about banking crises is correct?

- a) In a solvency crisis the assets of a bank are greater than its liabilities.
- b) In a liquidity crisis the assets of a bank are greater than its liabilities.
- c) A solvency crisis can be easily solved if the central bank lends more money to banks.
- d) A liquidity crisis is always due to a bank run.

Question 10

Many western countries are experiencing a lower birth rate in recent years. If nothing else has changed what is a consequence of this decrease in population growth according to the Solow model?

- a) Lower investments at the steady state.
- b) A higher saving rate.
- c) A lower saving rate.
- d) Higher investments at the steady state.

SECTION B: Microeconomics

Candidates should answer **ONE** of the following long questions. It is essential that you explain your answers.

Question 11

Chloe sets aside a budget of £100 for spending on fashion accessories (good X) and cosmetics (good Y), the prices of which are $P_X = 50$ and $P_Y = 25$, respectively. Chloe's preferences over the two goods are described by the utility function $U(X, Y) = XY$, for which $MU_X = Y$ and $MU_Y = X$.

- (a) Explain how Chloe's preferences can be translated into indifference curves. Sketch some of these in a diagram. Do her indifference curves touch the axes? [7 marks]
- (b) Find the number of fashion accessories and cosmetics that Chloe chooses to consume and illustrate her choice in your diagram. [8 marks]
- (c) Chloe invites her closest friends to celebrate her birthday and receives 8 fashion accessories as gifts, but no cosmetics. What is her utility gain from these gifts, assuming Chloe starts from the bundle in (b)? Add Chloe's new bundle and corresponding indifference curve in your diagram. [5 marks]
- (d) Analyse whether Chloe would be better off receiving a gift voucher equivalent in value to 8 fashion accessories, but which she can spend as she likes. Do you find this model a good description of the enjoyment from receiving birthday gifts? [10 marks]

Question 12

There are many price-taking mozzarella cheese producers in Southern Italy. Each of them produces mozzarella of similar quality with identical production technology that gives rise to a U-shaped total average cost curve. There is free entry into and exit from the mozzarella cheese market and potential entrants can expect to produce mozzarella using the same technology as incumbent firms.

- (a) Draw a sketch of the cost curves of each mozzarella producer and explain why the supply curve of each producer is the marginal cost curve above average total cost in the long run. [8 marks]
- (b) The market price of mozzarella is observed to be higher than the minimum of average total cost. Can this be an equilibrium outcome in the short run? Can this be an equilibrium outcome in the long run? If yes, explain why; if not, identify the equilibrium outcome and explain how it will be reached. Support your answer with suitable diagrams. [15 marks]
- (c) The mozzarella producers realise that if they brand their product they will face their own downward sloping demand curve and can set their own price. Can they expect to be more profitable in the long-run if they differentiate their products through branding? Assume that branding does not impact their costs. [10 marks]

SECTION C: Macroeconomics

Candidates should answer **ONE** of the two following long questions. It is essential that you explain your answers.

Question 13

Utopia is founded as a simple economy with no government or international trade. Utopia's economy is described by the following equations.

Consumption: $C = 20 + 0.8Y$

Investment: $I = 80$

- (a) Sketch the Aggregate Demand (AD) schedule and find the multiplier and the equilibrium level of income in Utopia. [10 marks]

In due course Utopia forms a government, which enacts fiscal policy and opens the country to trade with neighbouring countries. The elected government introduces income tax $t = 0.25$ and spends $G = 100$, while signing a free trade agreement. The economy exports 30, while the marginal propensity to import is 0.1.

- (b) Find the new multiplier and the equilibrium level of income. Add the new AD curve to your sketch in (a) and comment on how the introduction of a government sector and trade has impacted the Utopian economy. [10 marks]
- (c) Find the budget deficit and trade balance in equilibrium. [5 marks]
- (d) A money market is formed in Utopia, and the central bank sets the interest rate. Discuss the effectiveness of monetary policy in Utopia as a means of stimulating the economy. Discuss with reference to the IS-LM framework. [10 marks]

Question 14

Researchland has a labour force (LF) of 50 million people. Of these 5 million are unemployed (U), and the rest employed (E). The rate of job loss for those in work is $j = 0.05$, whereas the hiring rate for those without jobs is $h = 0.95$.

- (a) Explain what the natural rate of unemployment is and derive an expression for it in terms of j and h . Find the natural rate of unemployment in Researchland. [10 marks]
- (b) Is unemployment in Researchland at the natural rate? If not, will unemployment converge to the natural rate over time? [10 marks]
- (c) The wide adoption of Microsoft Teams, Zoom, and similar technologies in the workplace have made it easier for employees to work remotely for part of the week, thereby adding greater flexibility to their ability to manage family responsibilities. Discuss what the likely effect of this on the labour force and thus on the labour market. [10 marks]