

# Introductory to Economics

**[Day] [Month] [Year]**

**Examination Paper**

**Sample Assessment**

**Answer ALL questions.**

**Clearly cross out surplus answers.**

**Time: 2 hours**

**The maximum mark for this paper is 100.**

**Any reference material brought into the examination room must be handed to the invigilator before the start of the examination.**

**Candidates are allowed to use a scientific calculator during this examination.**

**Answer ALL questions**

**Question 1**

a) "Factors of production" is a term used in economics to refer to the inputs required to produce goods and services to make an economic profit. These inputs include any resources necessary to create goods and services, such as land, labour, capital, and entrepreneurship.

i) What distinguishes entrepreneurship from labour as a factor of production?

**2**

**Mark scheme**

***(1 mark for the quality of an entrepreneur and the counterpart quality of a labourer up to a maximum of 2 marks, as shown below):***

- ***Entrepreneurship refers to the ability to organise the resources, land, labour, and capital to produce goods and services (1 mark). In contrast, labour refers to the physical and mental effort of people that could be used in producing goods and services. (1 mark)***
- ***An entrepreneur is an innovator who attempts to introduce on a commercial basis some new products, product techniques, or even new forms of business organisation (1 mark). A labourer is not a person who is involved in introducing innovations on a commercial basis. (1 mark)***
- ***Entrepreneurs make principal business policy decisions, that is, those non-routine decisions which set the course of a business enterprise (1 mark). Entrepreneurs hire labour to carry out their decisions. (1 mark)***
- ***Entrepreneurs are risk bearers, and they thrive on risk (1 mark). On the other hand, workers avoid risk. (1 mark)***

ii)	Explain “The Law of Increasing Opportunity Cost” and state the THREE (3) causes of opportunity cost increase.	2
<p><b>Mark scheme</b></p> <p><i>On the production possibilities curve, when the production of one good increases by equal quantities, the quantity of the other that needs to be sacrificed will increase gradually.</i></p> <p><i>When all available resources have been fully utilised, the increase in the production of one good results in an increase in its opportunity cost or the quantity of other goods that must be sacrificed. (1 mark)</i></p> <p><i>There are THREE (3) causes for increasing opportunity costs:</i></p> <ul style="list-style-type: none"> <li>• <i>Resources are not homogeneous. Therefore, ONE (1) type of resource is not perfectly substitutable for another.</i></li> <li>• <i>Techniques of production used to produce different goods and services are different.</i></li> <li>• <i>A resource more appropriate to produce a particular good or service is not so right to have another good or service.</i></li> </ul> <p><i>(1 mark for all THREE (3) causes correctly stated)</i></p>		

iii) How does a market economic system differ from a command economic system in solving the questions about resource allocation?

**Mark scheme**

**(1 mark for each correctly stated quality of market economy up to a maximum of 2 marks, as below):**

- ***In a market economy, decisions relating to resource allocation are made without any central direction. They are nevertheless coordinated. The main coordinating device is the set of market-determined prices.***
- ***Market economies require no planning authority, no bureaucracy, to allocate resources. The price mechanism works as a result of millions of decisions made by individual producers and consumers acting in their own self-interest.***
- ***The key to the entire process of resource allocation in a market economy is to be found in the role of prices, which perform the crucial function of providing signals that help to determine the allocation of resources.***

**(1 mark for each correctly stated quality of command economy up to a maximum of 2 marks, as below):**

- ***In command economies, questions about resource allocation are decided by some central authority, which makes all the necessary decisions on what to produce, how to produce, and who gets it. Such economies are characterised by centralisation of decision-making.***
- ***Centralised decision making requires a comprehensive plan for the economy to solve basic economics questions. Planners need to know the entire range of technological possibilities for production and to have full details of the supplies of all factors of production. Based on this information, planners decide their choices of goods and services to be produced and how to produce them. Planning the allocation of commodities is done by decrease. E.g. by rationing. However, planners often use prices for distribution. They set the prices of consumer goods and leave individuals to buy what they wish at the controlled prices.***

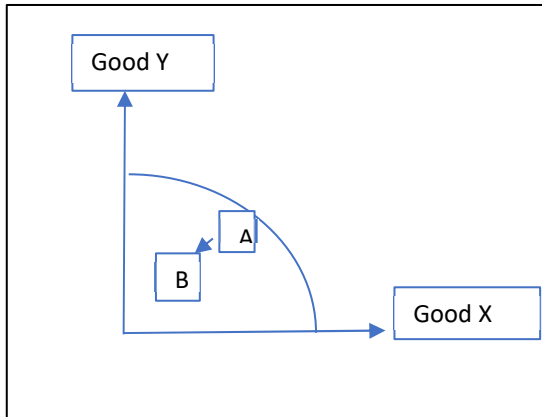
b)	The production possibility frontier (PPF) demonstrates the maximum output that can be produced with the available resources. PPF provides a range of answers to economic questions.	
i)	Describe, using a production possibility curve, how economists can grow faster if they are willing to cut back on current consumption	3
<p><b>Mark scheme</b></p> <p><b>(1 mark for each of the following points up to a maximum of 3):</b></p> <ul style="list-style-type: none"> <li>• <b>Price Mechanism performs three roles in a market economy.</b> <ol style="list-style-type: none"> <li>1. <b>Supply signals</b></li> <li>2. <b>Supply incentives</b></li> <li>3. <b>Rationing</b></li> </ol> </li> <li>• <b>The role of price mechanism for allocating resources among alternative uses can be said that to solve the problem of what and how many/much to produce, how to produce.</b></li> <li>• <b>The question of what and how many/much to produce solves the allocation of resources to produce more profitable goods.</b></li> </ul>		

- ii) Using the production possibilities curve, explain the impact on the economy of each of the following:
- (a) a rise in the unemployment rate
  - (b) an increase in the working-age population

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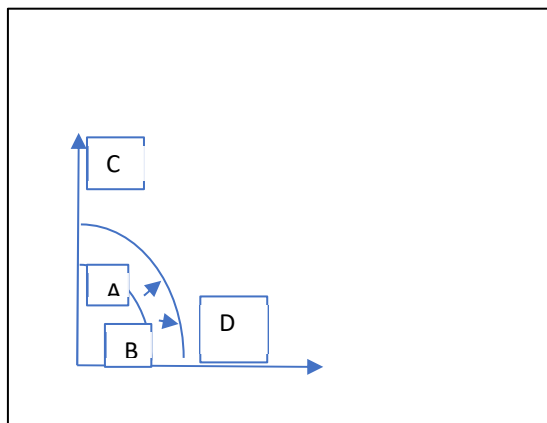
**Mark scheme**

**When the unemployment rate rises, utilising available economic resources further contracts. Therefore, the output should shift to the left or below point A, as shown in the diagram. Point A should be inside the PPC.**



**1 mark for the correct diagram and 1 mark for the correct explanation.**

**When the working-age population in the economy increases, the size of the resource endowment of the economy expands. As a result, the production capacity or the potential output of the economy increases. This can be shown in the diagram by shifting the PPC to the right. (From AB to CD)**



**1 mark for the correct diagram and 1 mark for a correct explanation**

c)	State THREE (3) conditions that define a monopoly.	3
<p><b>Mark Scheme</b></p> <p><i>(1 mark for each of the below points, up to a maximum of 3):</i></p> <ul style="list-style-type: none"> <li>• <i>There is only one firm producing a good or service</i></li> <li>• <i>No close substitutes for the good or service sold</i></li> <li>• <i>There are barriers to entry that prevent competing firms from entering the market.</i></li> </ul>		
d)	Explain the term legal monopolies.	2
<p><b>Mark Scheme</b></p> <p><i>Some monopolies are created by government legislation such as patent or copyright laws and the granting of public franchises (1 mark). Monopolies that are created because of legal barriers to entry are called legal monopolies (1 mark)</i></p>		
<b>Total 20 Marks</b>		
<b>Question 2</b>		
a)	In TWO (2) key points, distinguish between the individual demand curve and the market demand curve.	2
<p><b>Mark scheme</b></p> <p><i>(1 mark for any correctly stated point from the below, up to a maximum of 2 marks):</i></p> <ul style="list-style-type: none"> <li>• <i>The individual demand curve is a simple graph showing the various amounts of a product an individual consumer is willing and able to purchase at each price in a series of prices during a specified period; all other things remain unchanged.</i></li> <li>• <i>The market demand curve is a graph showing the total quantities of a product all consumers are willing and able to purchase at each price during a specified period, all other things remain unchanged.</i></li> <li>• <i>The market demand curve is the horizontal sum of the individual demand curves and is formed by adding the quantities demanded by everyone at each price.</i></li> </ul>		

b)	Giffen good is an inferior good, but an inferior good is not necessarily a “Giffen Good” Explain.	3
<p><b>Mark scheme</b></p> <p><i>(1 mark for any correctly stated point from the below, up to a maximum of 3 marks):</i></p> <ul style="list-style-type: none"> <li>• <i>The effect of a change in the price of an inferior good is different. For an inferior good, the income effect is negative. Thus, for an inferior good, a lower price does not always lead to an increase in the quantity demanded.</i></li> <li>• <i>The lower price has a substitution effect that permanently increases the quantity demanded. The negative income effect offsets the substitution effect. The result depends on the relative strengths of the two effects.</i></li> <li>• <i>Thus, for some inferior goods, the negative income effect only partially offsets the substitution effect. Therefore, quantity demanded increases because of the price decrease, though not as much as for a normal good. This is the typical pattern for inferior goods, and it, too, leads to negatively sloped demand curves.</i></li> <li>• <i>When the negative income effect outweighs the substitution effect, it leads to a positively sloped demand curve. This is the case of Giffen goods. For this to happen, the good must be inferior. But that is not enough; the change in price must have a negative income effect strong enough to more than offset the substitution effect. Therefore, all inferior goods are not Giffen goods.</i></li> </ul>		
c)	What is meant by the price elasticity of demand?	2
<p><b>Mark scheme</b></p> <p><i>Price elasticity of demand is the measure of the responsiveness of the quantity demanded of a good to changes in its price.</i></p> <p><i>It is calculated by dividing the percentage change in quantity demanded by the percentage change in price. The following formula defined as:</i></p> $\text{Price Elasticity of Demand} = \frac{\% \text{ change in quantity demanded}}{\% \text{ change in price}}$ <p><i>(1 mark for the definition and 1 mark for the formula or method of calculation)</i></p>		



d)	<p>Consider that farmers who cultivate potato in a certain country are having a hard time making a living selling potatoes. The current demand and supply conditions in the pumpkin market are given by the equations below.</p> <p><i>Demand (QD) = 350 – 10p</i>                      <i>Supply (QS) = –40 + 5p</i> <i>P</i> is the price in pound per kilogram and <i>Q</i> is quantity in metric tons.</p>	
i)	<p>What are the market equilibrium price and quantity?</p>	2
	<p><b>Mark scheme</b></p> <p><b>Market equilibrium price and quantity:</b>  <math>Qd = Qs</math>  <math>350 - 10P = -40 + 5P</math>  <math>390 = 15P</math>  <math>P = \text{£} 26</math> (1 mark)</p> <p><math>Qd = 350 - 10(26)</math>  <math>Qd = 350 - 260</math>  <math>Qd = 90</math> metric tons (1 mark)</p>	
ii)	<p>Suppose the government decides to help farmers by implementing a deficiency payment scheme. Under this scheme, the government will guarantee farmers that they will receive 30 pounds per kilogram of potato, and they ask that they sell all the potatoes they produce at whatever price they can get from the market. How much potatoes will the farmers supply to the market now?</p>	2
	<p><b>Mark scheme</b></p> <p><b>At the price of £30 per kg, market supply will be:</b>  <math>Qs = -40 + 5P</math> (1 mark)  <math>Qs = -40 + 5(30)</math>  <math>Qs = -40 + 150</math>  <math>Qs = 110</math> metric tons (1 mark)</p>	

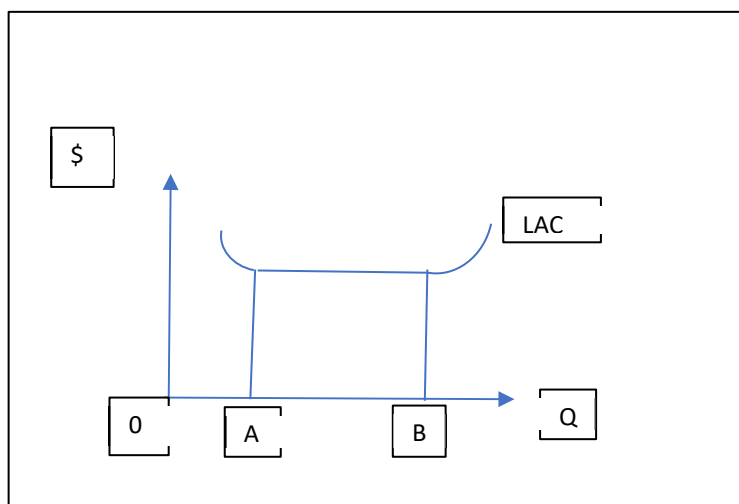
iii)	What price do farmers need to charge to sell the entire supply? How much will farmers receive from the government as deficiency payment?	2
	<p><b>Mark scheme</b></p> <p><b>Price to be charged to sell the total farm supply:</b>  <math>Qd = 350 - 10P</math>  <math>Qd = 110</math>  Therefore: <math>110 = 350 - 10P</math>  <math>10P = 350 - 110</math>  <math>10P = 240</math>  <math>P = £24 \text{ per kg} \quad (1 \text{ mark})</math></p> <p><b>Deficiency payment per kg=</b>  <b>Guarantee price (£30 per kg)- Market price (24 per kg) = £6 per Kg</b>  <b>Total deficiency payment= 6 per kg x (110 metric tons)</b>  <math>=6 \times 110,000 = 660,000</math>  <math>=660,000 \quad (1 \text{ mark})</math></p>	
iv)	Calculate the consumer surplus and producer surplus after the introduction of the deficiency payment scheme.	2
	<p><b>Mark scheme</b></p> <p><b>Consumer surplus and producer surplus after the deficiency payment scheme:</b>  <b>Consumer Surplus= Maximum demand price- market price x (Quantity purchased) ÷2</b>  <math>35-24 \times (110,000) \div 2</math>  <math>= 1,210,000 \div 2 = 605,000</math>  <math>=£605,000 \quad (1 \text{ mark})</math></p> <p><b>Producer surplus</b>  <b>= price received by the farmer- Minimum Supply price x (Quantity sold) ÷2</b></p> <p><b>Producer surplus = 30-8 x (110,000) ÷2 = 22x 110,000 ÷2 = £1,210,000 (1 mark)</b></p>	

e)	In THREE (3) key points, explain what price discrimination is and state ONE (1) example of it.	3
<p><b>Mark scheme</b></p> <p><i>(1 mark for each of the points below, up to a maximum of 3 marks):</i></p> <ul style="list-style-type: none"> <li>• <i>A firm price discriminates when it sells different units of a good or service for different prices</i></li> <li>• <i>A firm also price discriminates when it sells different units of its product to the same person for different prices, such as when an ice cream store charges a lower price for a second scoop of ice cream</i></li> <li>• <i><u>Example:</u> For instance, a firm price discriminates when it sells its good or service to different people for different prices, such as when airlines charge different customers different fares for the same flight.</i></li> </ul>		
f)	In TWO (2) key points, state how monopsony differs from a monopoly in terms of market structure.	2
<p><b>Mark scheme</b></p> <p><i>(1 mark for each of the points below, up to a maximum of 2 marks):</i></p> <ul style="list-style-type: none"> <li>• <i>While a monopsony involves a single buyer facing multiple sellers, a monopoly involves a single seller facing multiple buyers.</i></li> <li>• <i>In a monopsony, the buyer has market power over the wage rate, while in a monopoly, the seller has market power over the price.</i></li> </ul>		
<b>Total 20 Marks</b>		

Question 3		
a)	State the THREE (3) general types of barriers to entry and describe each of them along with an example.	7
	<p><b>Mark scheme</b>  <b>Barriers to entry can be divided into legal barriers, ownership barriers and natural barriers. (1 mark)</b></p> <p><b>Legal barriers occur when government action blocks competition in a market (1 mark). For instance, the government could grant a public franchise, government license, patent, or copyright. In all cases, government action prevents other firms from entering the market. (1 mark)</b></p> <p><b>Ownership barriers occur when a firm buys a significant portion of a natural resource (1 mark). For instance, DeBeers controls over 80 per cent of the world's diamond market. The last barrier to entry is a natural barrier. (1 mark)</b></p> <p><b>A natural barrier to entry occurs when economies of scale are so large that they make it possible for one firm to meet the entire market demand at a lower price than could TWO (2) or more firms (1 mark). In this case, the market will "naturally" evolve to become a monopoly as a larger firm uses its cost advantage to cut its price and drive its high-cost, smaller competitors out of business. (1 mark)</b></p>	
b)	What is the relationship between the long run and the short run?	1
	<p><b>Mark Scheme</b></p> <p><b>The long run can be viewed as the period for which the firm plans to build the most appropriate scale of plant to produce the future level of output. Once the firm has built a particular scale of plant, it operates in the short run. Thus, the firm operates in the short run and plans for the long run. The implementation of these long-run plans determines the short-run situation in which the firm will operate in the future. (1 mark)</b></p>	
c)	How can be the long run average cost curve be derived? What does it show?	2
	<p><b>Mark Scheme</b></p> <p><b>The Long-run average cost curve is the envelope of all the Short-run average cost curves and shows the minimum per-unit cost of producing each output level. (1 mark)</b></p> <p><b>The long-run average cost curve is tangent to the short-run average cost curves to the left of their minimum points. The scale of a plant whose short-run average cost curve forms the minimum point on any Long-run average cost curve. (1 mark)</b></p>	

d)	Draw a Long-run Average Cost (LAC) curve showing increasing returns to scale over a small range of outputs, constant returns to scale over a “large range” of outputs and decreasing returns to scale thereafter. Then, Comment on the relationship between LAC and returns to scale.	5
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**Mark Scheme**



**(1 mark for each of the below drawn correctly in a graph):**

- **The increasing returns to scale or decreasing LAC up to output OA;**
- **Constant returns to scale or constant LAC is between OA and OB;**
- **and decreasing returns to scale or increasing LAC.**

**Thus, LAC and returns to scale are opposing sides of a coin (1 mark). When economies of scale overwhelm the diseconomies of scale, the LAC curve falls; otherwise, the LAC is either constant or rising. The actual output level at which the LAC stops falling or growing depends on the industry. (1 mark)**

e)	Using indifference curve analysis, derive an elastic demand curve of commodity X for a reduction in $P_x$ , keeping constant the price of Y and the consumer's taste and money income.	2
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**Mark Scheme**

**Point A on budget line 1 and indifference curve I is the original consumer equilibrium point. When  $P_x$  falls, equilibrium is at point B, where indifference curve II is tangent to budget line 2 (1 mark). The movement from point A to point B (Q1Q4) is the total substitution and income effects of the fall in  $P_x$  and gives  $dx$  (demand curve) in the bottom panel. Because the slope of the price consumption curve is negative between points A and B,  $dx$  is price-elastic. (1 mark)**

f)	In THREE (3) key points, state what partial equilibrium analysis is and why it is used.	3
<p><b>Mark Scheme</b></p> <p><b>(1 mark for each of the below points that define partial equilibrium analysis, up to a maximum of 2 marks)</b></p> <p><b>Partial equilibrium analysis:</b></p> <ul style="list-style-type: none"> <li>• <b>studies specific decision-making units and markets by abstracting from the interconnections between them and the rest of the economy.</b></li> <li>• <b>Thus, it examines in detail the behaviour of individual people acting as consumers, managers, and owners of factors of production.</b></li> <li>• <b>Also, it is a study of the workings of individual markets.</b></li> </ul> <p><b>(1 mark for the justification of usage):</b></p> <ul style="list-style-type: none"> <li>• <b>The justification for doing this is that partial equilibrium analysis reduces the problem under study to manageable proportions, while at the same time giving, in most instances, a sufficiently close approximation to the results sought.</b></li> </ul>		
<b>Total 20 Marks</b>		

**Question 4**

a) From the following table, find the average product and the marginal product of labour. **6**

Land	1	1	1	1	1	1	1	1	1	1
Labour	0	1	2	3	4	5	6	7	8	9
Total Product	0	2	5	9	12	14	15	15	14	12

**Mark scheme**

Land	Labour	TP	APL	MPL
1	0	0	0	-
1	1	2	2	2
1	2	6	3	4
1	3	12	4	6
1	4	16	4	9
1	5	25	5	7
1	6	18	3	6
1	7	14	2	6
1	8	8	1	0
1	9	6	0.5	-2

*(3 marks for all entries correctly inserted in the APL column, and 3 marks for all entries correctly inserted in the MPL column. Deduct 1 mark per error up to a maximum of 6 marks).*

b) In terms of “Labour” and “Land” in part (a) above, what does the law of diminishing returns to scale state? **2**

**Mark scheme**

*As more units of labour per unit of time are used to cultivate a fixed amount of land, after a point, the MPL will decline (1 mark). This is one of the most important laws of economics and is referred to as the law of diminishing returns. To observe the law of returns, one input must be kept fixed while the other is varied. Technology also remains constant. (1 mark)*

c)	From your answer to part (a) above, determine whether the law of diminishing returns operates. Explain.	2
<p><b>Mark scheme</b></p> <p><b>Yes (1 mark), the law of diminishing returns begins to operate at a certain point where the Marginal product of labour starts to decline. Before this point, labour is used too sparingly on one acre of Land, and so rather than increasing, diminishing returns to labour start to occur. (1 mark)</b></p>		
d)	What are the THREE (3) types of unemployment and how do they change over the business cycle?	5
<p><b>Mark scheme</b></p> <p><b>The three types of unemployment are frictional, structural, and cyclical. (1 mark for all of them correctly stated)</b></p> <p><b>(1 mark for each of the below points up to a maximum of 4 marks)</b></p> <ul style="list-style-type: none"> <li>• <b>The two types frictional and structural have no strong effect on the business cycle.</b></li> <li>• <b>The third type, cyclical unemployment, however, is the result of the business cycle.</b></li> <li>• <b>When the economy is in a recession and people lose their jobs as a result of the recession, the unemployed workers are cyclically unemployed.</b></li> <li>• <b>Conversely, when the economy is in an expansion, cyclical unemployment decreases. Hence, cyclical unemployment increases during a recession and decreases during an expansion.</b></li> </ul>		
e)	Define frictional unemployment and, in TWO (2) key points, give an example of how a spell of frictional unemployment can begin.	3
<p><b>Mark scheme</b></p> <p><b>(1 mark for each of the below points up to a maximum of 3 marks):</b></p> <ul style="list-style-type: none"> <li>• <b>Frictional unemployment is the unemployment resulting from normal turnover in the labour market. For instance, there are always people entering or re-entering the labour force (entrants and re-entrants) and while these people look for work, they are frictionally unemployed</b></li> <li>• <b>Similarly, there are always some people who quit their jobs to look for something better, and these people are frictionally unemployed</b></li> <li>• <b>There is always a normal ebb and flow among firms as some gain sales while others lose them. The firms that lose business might release workers and these people also are frictionally unemployed</b></li> </ul>		



f)	Briefly explain why there will always be unemployment even when the economy is at "full employment".	2
<p><b>Mark scheme</b></p> <p><i>(1 mark for each of the below points up to a maximum of 2 marks)</i></p> <ul style="list-style-type: none"> <li>• <i>Unemployment is a natural occurrence in any economy with changes, such as high school or college graduates entering the labour force, or technological advances in one sector, or consumer preferences changing to favour one product over another. Frictional and structural unemployment will always exist.</i></li> <li>• <i>Cyclical unemployment, however, is a different matter. Cyclical unemployment does not seem to have the same degree of inevitability and hence full employment is defined as occurring when cyclical unemployment equals zero.</i></li> </ul>		

**Total 20 Marks**

<b>Question 5</b>		
a)	Explain what a budget constraint line is.	1
<p><b>Mark scheme</b></p> <p><i>The budget constraint line shows all the different combinations of the TWO (2) commodities that a consumer can purchase, given his or her income and the prices of the two commodities (1 mark).</i></p>		

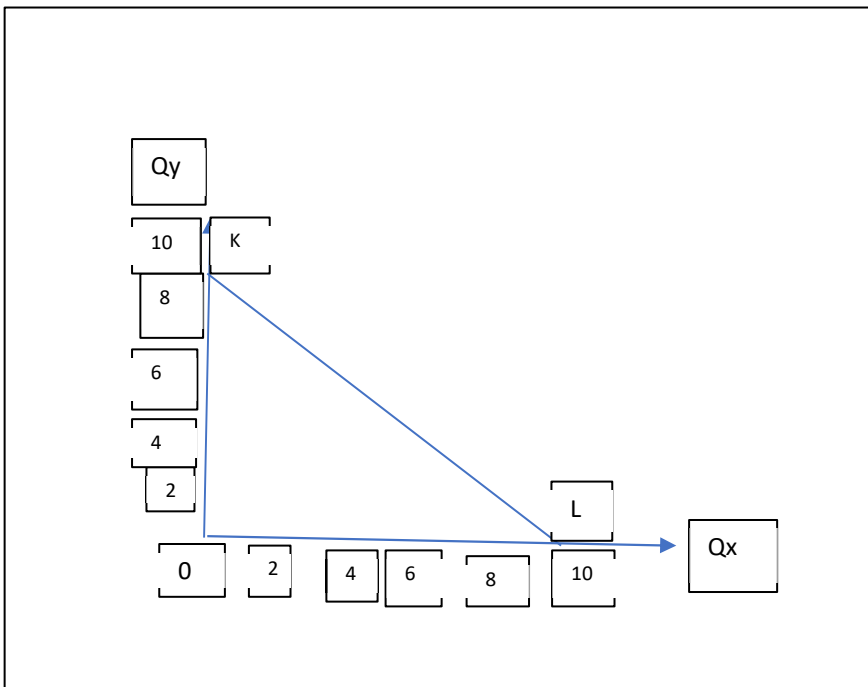
b) Suppose that  $P_x = P_y = \$1$ . A consumer's income is \$10 per period, which is spent on goods X and Y. Draw the budget line and explain.

4

**Mark scheme**

*The budget line for this consumer is drawn by the line KL. If the consumer spent all her income on commodity Y, she could purchase 10 units of Y (1 mark). This defines point K. If she spent all her income on commodity X, she could purchase 10 units of X. This defines point L. By joining point K to L by a straight line the budget line KL can be drawn. (1 mark).*

*(2 marks for a correctly drawn graph with 1 mark for two axes correctly labelled  $Q_y$  and  $Q_x$ , and 1 mark for a straight budget line, as the below):*



- c) Scott worked in a large foreign country. He retired in 2013 and his pension income is fixed at £1,500 per month. The table below gives the CPI in this country. What is the real monthly value of his pension in the years between 2013 and 2016?

Year	CPI
2013	100.0
2014	102.5
2015	106.0
2016	111.0

**Mark scheme**

$$\text{Real value of the pension} = \frac{1,500}{\text{CPI}} \times 100 \quad (1 \text{ mark})$$

**2013: £1,500.00; (1 mark)**

**2014, £1,463.41; (1 mark)**

**2015, £1,415.09; (1 mark)**

**2016: £1,351.52. (1 mark)**

- d) For each of the following values of nominal GDP and real GDP, calculate the GDP price index.
- Nominal GDP = £600, real GDP = £800.
  - Nominal GDP = £900, real GDP = £900.
  - Nominal GDP = £1,200, real GDP = £1,000.

**Mark scheme**

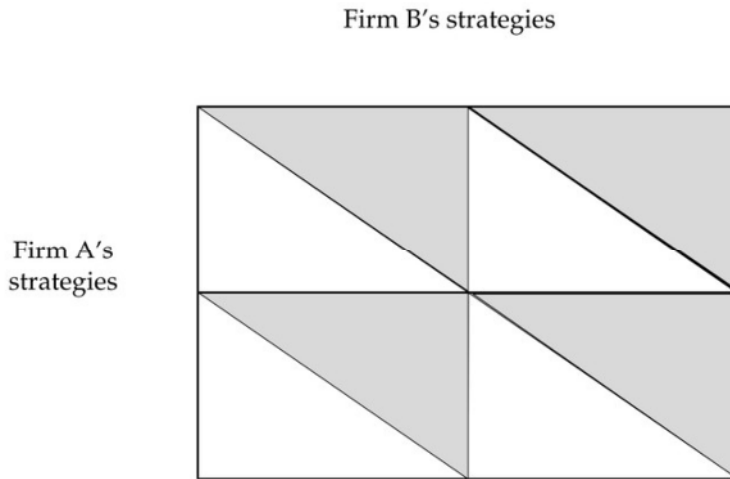
$$(a) \text{ GDP price index} = \frac{600}{800} \times 100 = 75 \quad (1 \text{ mark})$$

$$(b) \text{ GDP price index} = \frac{900}{900} \times 100 = 100 \quad (1 \text{ mark})$$

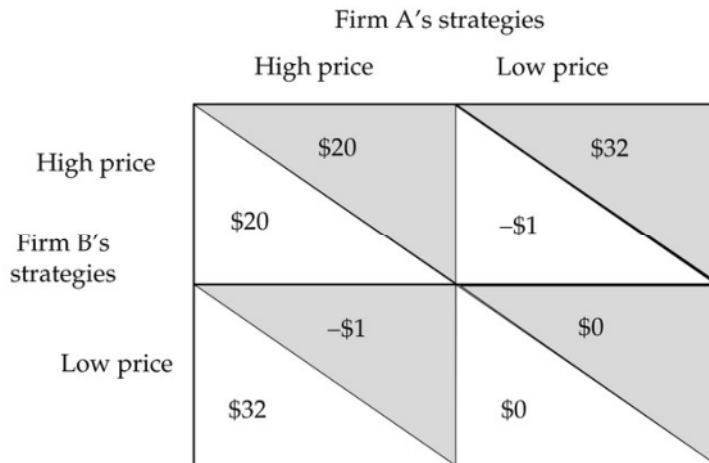
$$(c) \text{ GDP price index} = \frac{1,200}{1,000} \times 100 = 120 \quad (1 \text{ mark})$$

e) TWO (2) firms are competing in a duopoly and are trying to decide which price to set. The TWO (2) prices under consideration are a high monopoly price and a low competitive level. If both seller A and seller B chose the monopoly price, each will make £20 million of economic profit. However, if ONE (1) picks the monopoly price while the other picks the competitive price, the high-price firm will lose £1 million while the low-price firm will make £32 million. If both sell at the competitive level, they both make zero economic profit.

Complete the payoff matrix below and determine the Nash equilibrium.



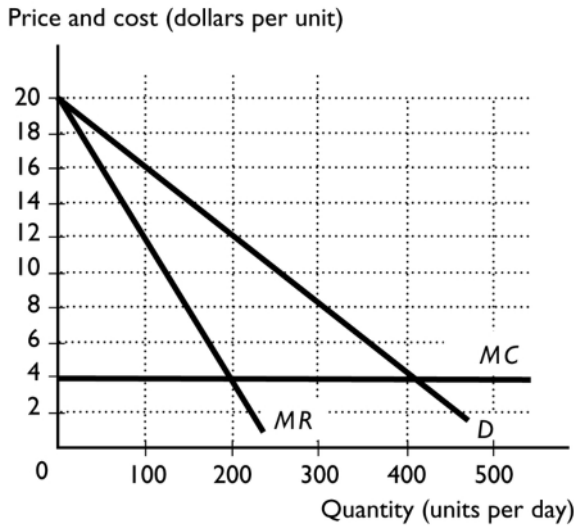
**Mark scheme**



**(1 mark for each correctly filled out quadrant as in the above payoff matrix - the economic profits are stated in millions of pounds.)**  
**The Nash equilibrium is for both to charge the competitive, low, price and make zero economic profit. (1 mark)**

f) The figure below shows the market demand curve for a market with THREE (3) firms. It also shows a firm's marginal cost curve. In this oligopoly, what is the range of output and prices? Why does this range of outcomes exist?

2



**Mark scheme**

**(1 mark for each of the below points up to a maximum of 2 marks):**

- **If the firms operate as a monopoly, they produce a total of 200 units per day and set a price of \$12 per unit. If the firms compete and operate as perfect competitors, they produce 400 units per day and the price is \$4 per unit.**
- **The range of possible outcomes exists because firms in oligopoly have the choice of colluding to decrease output to monopoly levels or cheating on the cartel and increasing output to its efficient level. A range of prices also exists between the monopoly price and the perfectly competitive price.**

**Total 20 Marks**

**End of paper**

## Learning Outcomes matrix

Question	Learning Outcomes / Assessment Criteria assessed	Marker can differentiate between varying levels of achievement
1	LO1, LO2	Yes
2	LO1, LO2	Yes
3	LO1, LO2	Yes
4	LO2, LO3	Yes
5	LO2, LO3	Yes

## Grade descriptors

Learning Outcome	Pass (40-59%)	Merit (60-69%)	Distinction (70-100%)
1. Acquire a firm grounding in introductory microeconomic theory and supply and demand, and recognise the key theoretical explanations of individual, firm and industry behaviour.	Demonstrates adequate knowledge and understanding of the subject matter.	Demonstrates good knowledge and understanding of the subject matter.	Demonstrates comprehensive knowledge and understanding of the subject matter.
2. Evaluate and critically analyse microeconomic arguments, theories and policies regarding the price system.	Provides consistent interpretation and evaluation of relevant information and ideas to complete tasks, address well defined problems, and give appropriate justification for conclusions.	Provides critical interpretation and evaluation of relevant information and ideas to complete tasks, address well defined problems, and give well explained and appropriate justification for conclusions.	Provides consistently critical interpretation and evaluation of relevant information and ideas to complete tasks, address well defined problems, and give well explained and highly appropriate justification for conclusions.
3. Develop a solid grasp of macroeconomic theory, and analyse and use analytical models for applications.	Demonstrates adequate ability to review effectiveness of methods, actions, and results.  Can adequately identify, select, and use appropriate information and/or skills, methods, and procedures to reach appropriate conclusions.  Uses appropriate	Demonstrates sound ability to review effectiveness of methods, actions, and results.  Can soundly identify, select, and use appropriate information and/or skills, methods, and procedures to reach well explained and appropriate conclusions.	Demonstrates comprehensive ability to review effectiveness of methods, actions, and results.  Can coherently identify, select, and use appropriate information and/or skills, methods, and procedures to reach well explained and highly appropriate conclusions.

**Marks**

	investigation and/or analysis of supplied information to inform conclusions.	Uses detailed investigation and/or detailed analysis of supplied information to inform conclusions.	Uses thorough and detailed investigation and/or consistently critical analysis of supplied information to inform well explained conclusions.
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