



**AFRICA
UNIVERSITY**

(A United Methodist-Related Institution)

"Investing in Africa's Future"

COLLEGE OF BUSINESS PEACE LEADERSHIP AND GOVERNANCE

COURSE TITLE: MEC 101 ECONOMICS PRINCIPLES 1

SEMESTER 1: FINAL EXAMINATION- JUNE 2017

LECTURER: MR T. MASESE

TIME: 3 HOURS

INSTRUCTIONS

Answer all questions in Section A and B

Answer any **THREE** Questions from section C

Total possible mark is 100.

Start **each** question on a new page in your answer Booklet.

The marks allocated to **each** question are shown at the end of the section.

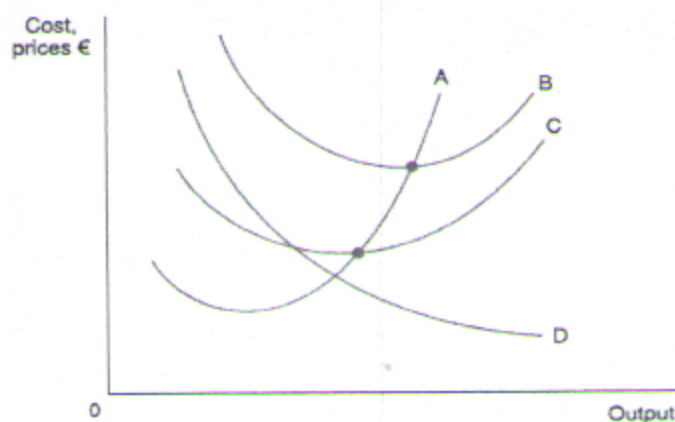
Show all your workings.

Credit will be awarded for logical, systematic and neat presentations.

Section A

(15 marks)

1. An isoquant curve reveals:
 - a. the various amounts of capital and output, with a fixed amount of labour
 - b. the various amounts of labour and capital required in order to produce the same level of output
 - c. the various amounts of labour and capital required in order to produce an increased level of output
 - d. the various amounts of labour and capital required in order to produce a reduced level of output
 - e. none of the above.
2. The figure below represents the short-run average and marginal cost curves. The average fixed cost curve is represented by:



- a. A
 - b. B
 - c. C
 - d. D
 - e. none of the above.
3. If the average variable cost is decreasing then:
 - a) marginal cost is below average variable cost
 - b) marginal cost is above average variable cost
 - c) marginal cost is equal to average variable cost
 - d) average fixed cost is increasing
 - e) none of the above.
4. In terms of producing a certain output a firm's average total cost is \$4 and its average variable cost is \$3.50. Overall, the firm's total fixed cost is \$1,000. As such, the firm's total output is:
 - a) 100 units
 - b) 250 units
 - c) 750 units

- d) 1,000 units
 - e) 2,000 units
5. The concept used to reveal the responsiveness of demand for a product to a change in the price of that product is termed:
- a) price elasticity of supply
 - b) price elasticity of demand
 - c) cross elasticity of demand
 - d) income elasticity of demand
 - e) none of the above.
6. If a small percentage drop in the price of a good leads to a large percentage increase in the quantity of that good demanded then:
- a) demand is inelastic
 - b) demand is elastic
 - c) demand is unit elasticity
 - d) demand is perfectly inelastic
 - e) demand is perfectly elastic.
7. If a 10% increase in price leads to a 4% reduction in the quantity of a good demanded then the price elasticity of demand is:
- a) -0.4
 - b) -0.6
 - c) -2.5
 - d) -4.0
 - e) -10.0
8. Which *one* of the following is a characteristic of a sole trader?
- a) Limited liability
 - b) Unlimited liability
 - c) Economies of scale
 - d) Ease of access to capital
 - e) None of the above.
9. If a demand curve is horizontal it indicates that:
- a) income elasticity of demand is zero
 - b) price elasticity of demand is infinity
 - c) price elasticity of demand is zero
 - d) price elasticity of demand is between zero and one
 - e) none of the above.
10. The revenue obtained from the sale of a good will fall if:
- a) income increases and the good is a normal good
 - b) price increases and demand is inelastic
 - c) price increases and demand is elastic
 - d) price falls and demand is elastic
 - e) income falls and the good is an inferior good.

11. A rise in the price of product Y from \$50 to \$54 has resulted in the demand for product X increasing from 100 to 104 units per month. The cross elasticity of demand is:

- a) 0.2
- b) 0.5
- c) 1.0
- d) 2.0
- e) 2.4

12. If the cross elasticity of demand between two goods X and Y is positive then:

- a) the two goods are substitutes
- b) the two goods are complements
- c) the demand for the two goods is price inelastic
- d) the demand for the two goods is price inelastic
- e) none of the above.

13. A 5% increase in income leads to an increase in the quantity demanded from 24 units per week to 27 units per week. The income elasticity of demand is:

- a) 1.0
- b) 1.5
- c) 2.0
- d) 2.5
- e) 3.0

14. Limited liability describes a situation where:

- a) all shareholders are equally responsible for all the debts of the company
- b) the responsibility of shareholders for the debts of a company is limited to the amount they agreed to pay for the shares when they brought them
- c) the responsibility of shareholders for the debts of a company is limited to the number of debentures they hold in the company
- d) the responsibility of shareholders for the debts of a company is limited to the value of their personal wealth.
- e) none of the above.

15. An isoquant curve reveals:

- a) the various amounts of capital and output, with a fixed amount of labour
- b) the various amounts of labour and capital required in order to produce the same level of output
- c) the various amounts of labour and capital required in order to produce an increased level of output
- d) the various amounts of labour and capital required in order to produce a reduced level of output
- e) none of the above.

Section B: Answer the following questions as True or False (15 marks)

- A. The shares of a private limited company can be sold on the Stock Exchange.
- B. Horizontal integration is where firms amalgamate at different stages of the productive process.
- C. In terms of short-run production then at least one of the factors of production is fixed.
- D. An isocost line measures the various combinations of capital and labour that a firm can buy with a given expenditure.
- E. When a firm's marginal costs are at a minimum, then marginal cost equals average cost.
- F. Marginal cost is the increase in total cost which results from an increase in output by one unit.
- G. In the long run, the resulting reduction in costs per unit as production increases is called economies of scale.
- H. If a product has price elasticity of demand greater than 1 then a rise in the price of the good will lead to a rise in total revenue received.
- I. An inferior good is one for which demand increases as income increases.
- J. Goods A and B are complementary if a rise in the price of good A leads to a fall in the demand for good B.
- K. Total revenue is the price of a product multiplied by the quantity sold.
- L. A firm's profits are maximized where marginal revenue equals marginal cost, with marginal cost cutting marginal revenue from below.
- M. In perfect competition each firm faces a perfectly elastic demand curve.
- N. In perfect competition a firm will continue to operate in the short run so long as it is covering its fixed costs.
- O. In perfect competition in the long run each firm will be making normal profit.

SECTION C: Answer Any Three Questions

Question 1

- a. What is the difference between a positive and a normative statement? Give an example of each **(4 marks)**
- b. How do mergers differ from takeovers? Explain the advantages of forward and backward vertical integration of firms. **(3 marks)**
- c. Draw a production possibilities frontier (PPF) for an economy that produces computers and cars. Briefly explain how the PPF you have drawn explain the concepts of scarcity, efficiency, economic growth, full employment, increasing opportunity cost and unemployment. Why is the production possibility frontier concave to the origin? **(10 marks)**
- d. Suppose in the economy in (b) above, new technology for producing cars is discovered, use the above PPF to illustrate the effects of this discovery. **(2 marks)**

- e. Briefly explain what is meant by price ceiling and price floor and the effect each of these price controls. Why would the government set price a price ceiling for maize? Why would the government set a price ceiling on maize meal (6 marks)

Question Two

- a. Suppose that the price of basketball tickets at your college is determined by market forces. Currently, the demand and supply schedules are as follows:

PRICE	QUANTITY DEMANDED	QUANTITY SUPPLIED
\$ 4	10,000	8,000
8	8,000	8,000
12	6,000	8,000
16	4,000	8,000
20	2,000	8,000

- Draw the demand and supply curves. What is unusual about this supply curve? Why might this be true? (5 marks)
- What are the equilibrium price and quantity of tickets? (2 marks)
- Your college plans to increase total enrollment next year by 5,000 students. The additional students will have the following demand schedule:

PRICE	QUANTITY DEMANDED
\$ 4	4,000
8	3,000
12	2,000
16	1,000
20	0

Now add the old demand schedule and the demand schedule for the new students to calculate the new demand schedule for the entire college. What will be the new equilibrium price and quantity? (5 marks)

- Under which circumstances might you advise a firm to lower the price of its product? (2 marks)
- You are given the following table on own price and cross elasticity for bread and butternuts.

	Bread	Butternuts
Bread	-0.09	0.8
Butternuts	0.8	-2.3

Comment on the interpretations of the elasticity values in table and outline the factors that can possibly explain each of the values. Briefly explain why marketers should understand the concept of elasticity **(5 marks)**

- d. Outline the main characteristics of a perfectly competitive industry **(6 marks)**

Question Three

- i. Suppose that business travelers and holiday travelers have the following demand for airline tickets from Harare to Victoria Falls:

PRICE	QUANTITY DEMANDED (BUSINESS TRAVELERS)	QUANTITY DEMANDED (VACATIONERS)
\$150	2,100	1,000
200	2,000	800
250	1,900	600
300	1,800	400

- a. As the price of tickets rises from \$200 to \$250, what is the price elasticity of demand for (i) business travelers and (ii) vacationers? (Use the midpoint method in your calculations.) **(4 marks)**
- b. Why might vacationers have a different elasticity than business travelers? **(2 marks)**
- ii. Consider public policy aimed at smoking:
- a. Studies indicate that the price elasticity of demand for cigarettes is about 0.4. If a pack of cigarettes currently costs \$2 and the government wants to reduce smoking by 20 percent, by how much should it increase the price? **(3 marks)**
- b. If the government permanently increases the price of cigarettes, will the policy have a larger effect on smoking one year from now or five years from now? **(2 marks)**
- c. Studies also find that teenagers have a higher price elasticity of demand for cigarettes than do adults. Why might this be true? **(2 marks)**
- iii. Outline what is meant by economies and diseconomies of scale and how they affect the shape of the long-run average cost curve. Briefly explain any two sources of economies of scale and one source of diseconomies of scale **(8 marks)**
- iv. Define the terms 'isoquant' and 'isocost'. What is meant by the least-cost process of production? **(4 marks)**

Question Four

- a. Briefly explain what is meant by (i) economies of scope (ii) minimum cost expansion expansion path (iii) law of diminishing returns (iv) organic growth of a firm (v) limited liability (vi) implicit costs (vii) sunk costs **(5 marks)**
- b. Consider the following table of long-run total cost for three different firms:

	QUANTITY						
	1	2	3	4	5	6	7
Firm A	\$60	\$70	\$80	\$90	\$100	\$110	\$120
Firm B	11	24	39	56	75	96	119
Firm C	21	34	49	66	85	106	129

Does each of these firms experience economies of scale or diseconomies of scale? **(3 marks)**

- c. Manica Timbers makes brooms and then sells them door-to-door. Here is the relationship between the number of workers and Manica's output in a given day: **(10 marks)**

WORKERS	OUTPUT	MARGINAL PRODUCT	TOTAL COST	AVERAGE TOTAL COST	MARGINAL COST
0	0				
1	20				
2	50				
3	90				
4	120				
5	140				
6	150				
7	155				

- d. Economists group industries into four distinct market structures which differ the number of firms in the industry, whether those firms produce a standardized product or try to differentiate their products from those of other firms, and how easy or how difficult it is for firms to enter the industry. List these four different industry structures. **(4 marks)**
- e. Briefly explain how you would derive the short run and long run supply curves of firm in a perfectly competitive industry **(3 marks)**

Question Five

- a. Illustrate with the aid of appropriate diagrams a short run scenario of a perfectly competitive firm: (i) making a loss (ii) making supernormal profit and (iii) making zero economic profits **(6 marks)**
- b. Explain the conditions for a firm to (i) shutdown and (ii) exit an industry **(3 marks)**
- c. Explain the meaning of the following estimates of elasticities and how the values recorded might be of use to the agricultural industry

	Beef and veal	Potatoes	All food
Price elasticity of demand	-1.25	-0.21	-
Income elasticity of demand	+0.08	-0.48	+0.01

(N.B- Veal is meat from calves) **(10 marks)**

- d. Outline any five factors which influence price elasticity of demand **(5 marks)**
- e. Briefly explain the importance of the elasticity concept **(1 mark)**

END OF PAPER