



The Co-operative University of Kenya

END OF SEMESTER EXAMINATION DECEMBER-2016

EXAMINATION FOR THE DEGREE OF BACHELOR OF CO-OPERATIVE BUSINESS/ BACHELOR OF COMMERCE / BACHELOR OF SCIENCE IN FINANCE

(BCOM YR II SEM I/ BCOM YR II SEM I/B.Sc F YR II SEM I)

UNIT CODE: HBC 2205/HCOB 2206/CMFI 2203

UNIT TITLE: INTERMEDIATE MICROECONOMICS/ INTERMEDIATE MICROECONOMIC THEORY

DATE: 13TH DECEMBER, 2016

TIME: 11:30 AM – 1:30 PM

INSTRUCTIONS:

- Answer question **ONE (compulsory)** and any other **TWO** questions

QUESTION ONE

- (a) Discuss the central economic problem using scarcity and opportunity costs concepts (4 marks)
- (b) A single commodity market model is represented by the following equations;
Demand function: $P = -Q^2 - 6Q + 7$
Supply function $P = Q^2 + 3Q + 2$

Required:

Find the equilibrium price and quantity in the market (6 marks)

- (c) A consumer has a utility function of the form $U = f(Q_1, Q_2)$ where Q_1 and Q_2 are two bundles of commodities consumed. Given that the price of Q_1 is shs 5 and that of Q_2 is shs 8. Assuming the consumer's income is shs 50.

Required:

- State the constrained utility maximization problem (2 marks)
 - Find the values of Q_1 and Q_2 that will maximize utility (8 marks)
- (d) Discuss in detail the THREE major properties of indifference curves (6 marks)
- (e) A disequilibrium is said to exist if quantity demanded is not equal to quantity supplied. Discuss (4 marks)

QUESTION TWO

- (a) Given a Cobb – Douglas production function
 $Q = AK^{1/3}L^{2/3}$ and the corresponding cost function $C = 2K + 3L$. The firm wishes to maximize its output given a cost outlay of shs 2000.

Required:

- Write down the maximization problem of the firm (2 marks)
- Find the values of K and L for which output is maximized (10 marks)
- Compute the maximum output (3 marks)
- Using the above production function, derive the MP_K and MP_L (5 marks)

QUESTION THREE

- (a) Discuss the profit maximizing behaviour of a firm in imperfectly competitive market in the short run (6 marks)
- (b) A monopolist cost function is given as
 $C = 10 + Q^2/2$ and his inverse demand function is $P = 20 - 2Q$

Required:

- i. Derive the total revenue and marginal revenue functions (4 marks)
- ii. Compute the maximum profit using price and quantity for the monopolist (10 marks)

QUESTION FOUR

- (a) The demand and total cost functions for a firm are given by;

$$P = 4 - \frac{1}{3}Q$$

$$TC = \frac{2}{3}Q^3 - Q$$

Required: Determine

- i. The level of output and price that will maximize profits (8 marks)
- ii. The level of output that will maximize total revenue (3 marks)
- iii. The level of output that will minimize marginal costs (3 marks)
- iv. The level of output that will minimize average variable costs (3 marks)
- v. The minimum average variable cost and marginal cost (3 marks)

QUESTION FIVE

- (a) Discuss the major causes of externalities in both the public and private goods (4 marks)
- (b) Discuss FOUR ways of dealing with negative externalities (12 marks)
- (c) Explain the role of the state in economic activities (4 marks)