

B.A. DEGREE (CBCSS) EXAMINATION

Model Question Paper - November 2011

First Semester

Complementary Course 7- Economics

MATHEMATICAL ECONOMICS.

Time: 3 Hours

Maximum weight: 25

Section. A

Answer all questions. Each bunch of four questions carries a Weight age of 1

Bunch 1

- 1 Marginal rate of Substitution is the rate of
 - a) Price to income
 - b) Income to price.
 - c) Marginal utility to price
 - d) Income to consumption

2. A Square Matrix in which all the diagonal elements are equal and non- diagonal elements are zero is called
 - a) Diagonal Matrix
 - b) Scalar matrix
 - c) Triangular Matrix
 - d) Unit Matrix

3. $A = A^T$, Then A is called
 - a) Orthogonal Matrix
 - b) Symmetric matrix
 - c) Skew symmetric matrix
 - d) None of these

- 4) Simultaneous equation means a set of equations in unknowns
 - a) One
 - b) Two
 - C) Any number of
 - d) None of them

Bunch II

5. The equation $x^2 + 4 = 0$ is a
 - a) Quadratic equation
 - b) Cubic equation
 - c) Simple equation
 - d) None of these

6. Profit Maximization with one variable input is

a) $MR = TC$

b) $MC = MR$

c) $MRTS = \frac{-AK}{AK}$

d) $\frac{MU_x}{P_x (Mum)} = \frac{MU_y}{P_y (Mum)}$

7. One of the following is not an assumption of indifference curve

a) More is preferred to less

b) Transitivity

c) Strong Ordering

d) Diminishing Marginal rate of substitution

Bunch III

8. The concept of substitution effect was put forward by

a) Slutsky

b) J.R. Hicks

c) Marshall

d) Keynes

9. When the total cost in a production function is given by $C + 4x + 500$, then the fixed cost is

a) 4

b) 500

c) 504

d) 0

10. The measure of elasticity of demand between any two finite points on a demand curve is known as

a) Price elasticity

b) Cross elasticity

c) Arc elasticity

d) Income elasticity

11. Homogenous production of the first degree can be mathematically expressed as

a) $Mq = f(MX, MY)$

b) $a = AL^a K^b$

c) b. $\frac{Q}{K} \cdot \frac{.K}{Q} = b$

d) $L = \frac{\Delta C}{\Delta L} \cdot \frac{.L}{O}$

12. If $A = \{1, 2, 3\}$ and B is $\{1, 2, 3\}$ then $A \cup B$ is

a) $\{1, 2, 3\}$

b) $\{1, 2, 3, 1, 2, 3\}$

c) $\{0\}$

d) \emptyset

Bunch IV

13. The value of the determinant $A = \begin{vmatrix} a & b \\ c & d \end{vmatrix}$ is

- a) $ad-bc$ b) $ab - cd$ c) $bd - ac$ d) $bc - ad$

14. Equilibrium refers to the state of

- a) demand = supply b) demand < supply
c) Supply < demand d) demand = 0

15. The slope of the Isoquant is

a) $MRTS = \frac{-\Delta K}{\Delta L}$ b) $MC = \frac{\Delta TC}{\Delta Q}$

c) $MU = \frac{\Delta TU}{\Delta Q}$ d) $\frac{MU_x}{P_x \text{ (Mum)}}$

16. When demand is inelastic

- a) $ep > 1$ b) $ep < 1$ c) $ep = 1$ d) $ep = 0$ (1x4=4)

Section B

Answer any Five Questions. Each question carries a Weight of 1.

17. Explain utility function

18. Explain price elasticity of demand

19. Find A - B and A + B

$$A = \begin{pmatrix} 6 & 0 & -7 \\ 7 & -2 & 3 \end{pmatrix} \quad B = \begin{pmatrix} 1 & 0 & -1 \\ 3 & 2 & 9 \end{pmatrix}$$

20. Explain Returns to scale?

21. Find the derivatives of a) x^4 b) \sqrt{x}

22. Explain cardinal and Ordinal utility

23. What is break -even point?

24. Explain economic region? (5x1=5)

Section B. Answer any four questions. Each question carries a weightage of 2

25. Explain the concept of Elasticity of demand with the help of an illustration

26. Find out the partial and total differentials

a) $Z = 2x^2 - 3xy + 4y^2$

b) $Z = 3x^2 + xy - 2y^3$

27. Explain Slutsky equation and Linearly homogenous production function.

28. Explain production function with single variable input.

29. a) If $A = \begin{pmatrix} 1 & 2 & 2 \\ 2 & 1 & 2 \\ 2 & 2 & 1 \end{pmatrix}$ prove that

$$A^2 - 4A - 5I = 0$$

b) Solve the equations, using Cramer's Rule

$$2x - y + 3z = 9$$

$$x + y + z = 6$$

$$x - y + z = 2$$

30. Explain Isoquants and Isoquant Map and properties of Isoquants (4x2=8)

Section D. Answer any two questions. Each question carries a weight of 4.

31. Explain Euler's theorem and its applications for various standard production functions

32. Define cost function, profit function and Revenue function. A text book publisher

find that the production costs to each book are Rs. 25 and that the fixed costs are

Rs. 15000. If each book can be sold for Rs. 45.

Determine:

a) Cost function

b) Revenue function

c) Profit function

d) Break even point

33. Explain the concept of utility. Analyse the consumer behavior of cardinal and Ordinal utility approach. (2x4=8)

Mahatma Gandhi University
B.A Degree(CBCSS) Examination - October 2011(Model Question)
Fifth Semester
Economics
Open Course - 5 Business Economics

Time: Three Hours

Maximum Weight: 25

Section A

Answer all questions

Each bunch of four questions carries a weightage of 1.

1. 1.A change in demand occurs due to change in:

- (a) Income
- (b) Consumer preferences
- (c) Prices of other goods
- (d) All the above

2. Managerial economics is best defined as the economic study of

- (a) how businesses can make the most profits.
- (b) how businesses can decide on the best use of scarce resources.
- (c) how businesses can operate at the lowest costs.
- (d) how businesses can sell the most products.

3. Accounting costs

- (a) are historical costs.
- (b) are replacements costs.
- (c) usually include implicit costs.
- (d) usually include normal profits.

4. The price elasticity of demand is a measure of:

- (a) the responsiveness of the quantity demanded to price changes
- (b) the quantity demanded at a given price
- (c) the shift in the demand curve when price changes
- (d) The demand for a product holding price constant

11. 5. The demand curve slopes downward due to:

- (a) Income effect
- (b) Substitution effect
- (c) Both income effect and substitution effect
- (d) None of these

6. The term Production Function refers to the:

- (a) Use of machinery and equipment in production
- (b) Relationship between costs and output
- (c) Relationship between inputs and output
- (d) Role of labor unions

7. The "Law of Diminishing Returns" states that

- (a) additional inputs will reduce output.
- (b) additional inputs will decrease average productivity.
- (c) the supply of inputs is becoming scarce.
- (d) additional inputs will lead to less additional output.

8. Break-even point refers to;

- (A) Point of intersection between Marginal Revenue and Marginal Cost
- (B) Point of intersection between Total Revenue and Total Cost
- (C) Point of intersection between Average Revenue and Average Cost
- (D) None of above

111. 9. The main difference between perfect competition and monopolistic competition is:

- (a) the number of sellers in the market
- (b) the ease of exit from the market.
- (c) the difference in the firm's profits in the long run.
- (d) the degree of product differentiation.

10 . A company which charges a lower price than may be indicated by economic analysis to gain a foothold in the market is practicing

- (a) price skimming.
- (b) psychological pricing.
- (c) penetration pricing.
- (d) prestige pricing

11. The net present value of a project is calculated as follows:

- (a) The future value of all cash inflows minus the present value of all outflows.
- (b) The sum of all cash inflows minus the sum of all cash outflows.
- (c) The present value of all cash inflows minus the present value of all cash outflows.
- (d) None of the above.

12. One of the following is not a method of demand forecasting:

- (a) Market survey
- (b) Consumer survey
- (c) Time series analysis
- (d) Case Study

1V. 13. Balance of trade includes:

- (a) Visible items
- (b) Invisible items
- (c) Both visible and invisible items
- (d) None of these

14. One of the following is not a property of isoquant:

- (a) Slopes downward from left to right (
- (b) Two isoquants can intersect each other

- (c) Isoquants are convex to origin (d) None of these
- 15.. Trade deficits arises when:
- (a) Exports are greater than imports (b) Exports are less than imports
- (c) Imports are greater than exports (d) None of the above
16. At Breat-even point:
- (a) $TC = TR$ (b) $TC < TR$
- (c) $TC > TR$ (d) $TVC < TFC$ **(4x1=4)**

Part B (Short answer Questions)

Answer any five of eight not exceeding 50 words. Each question carries a weight of 1

17. What is price discrimination/
 18. What is Price Skimming?
 19. Write any two limitations of Pay –Back Method
 20. Mention the meaning of accounting profit.
 21. Bring out the features of perfect competition
 22. Explain demand function
 23. What are the modern objectives of a firm?
 24. Explain business cycles **(5x1=5)**

Section C (Short Essays)

Answer any four questions not exceeding 150 words. Each question carries a weight of 2.

25. Explain the scope and importance of business economics
 26. Explain the various techniques of demand forecasting
 27. Explain the concept of capital budgeting
 28. Explain the determinants of demand
 29. Explain the utility analysis of demand
 30. What are the different phases of business cycles? **(4x2=8)**

Sections D (Long Essays)

Answer any two questions not exceeding 450 words. Each question carries a weight of 4

31. What are the important methods of investment criteria and find out internal rates of return for the project from the data given below:
 Initial capital outlay of project is Rs 40,000 and cash flow of Rs. 25,760, Rs 17,760 and Rs 13,760 for 3 years.
 32. Explain the break-even analysis and bring out its uses in business decisions
 33. Define Foreign Exchange Rate. How is it determined? **(2x4=8)**

