

2024

## ECONOMICS — HONOURS

Paper : DSCC-3

(Microeconomics - II)

Full Marks : 75

*The figures in the margin indicate full marks.**Candidates are required to give their answers in their own words as far as practicable.*

## Group - A

1. Answer *any ten* questions :

2×10

- (a) What is derived demand?
- (b) Define an inferior good.
- (c) State the Weak Axiom of Revealed Preference Approach.
- (d) Distinguish between returns to scale and returns to factor.
- (e) What is a 'Shut-down Point'?
- (f) Define marginal revenue product of a labour.
- (g) Is the firm's expansion path always a straight line? Justify your answer.
- (h) The supply curve for labour is given by :  $L = 20W$ .

If equilibrium wage rate is 40 and equilibrium level of labour employment is 800 units, find the economic rent.

- (i) If  $W = ₹ 50$  a day and  $r = ₹ 100$  per day, what is the equation of the isocost line, if the firm chooses to spend 10,000 a day on capital and labour? What is the slope of the isocost line?
- (j) The equation of the total cost curve facing a perfectly competitive firm in the short run is  $TC = 50 + 2q^2$ . Explain why the firm will never shut down production in the short run.
- (k) Graph the total revenue curve of a competitive firm, price being ₹ 5.
- (l) What does the rectangle under Average Fixed Cost curve represent at any level of output? Does the area increase with the level of output? Justify your answer.
- (m) What do you mean by sunk cost?
- (n) If the utility function of an individual is given by :  $u = w^2$ , where  $w$  denotes wealth, comment on his attitude towards risk.
- (o) A lottery has three possible outcomes. ₹ 100 will be received with probability 0.1, ₹ 50 will be received with probability 0.2 and ₹ 10 will be received with probability 0.7. What is the expected value of lottery?

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- (b) A firm produces bicycles using two variable inputs— bicycle frames and wheels.
- What would be the shape of the isoquants?
  - What is the degree of substitutability between the two inputs?
  - Draw the isoquants for 100 and 200 units of output. (2+1+2)+(1+1+3)
6. (a) (i) Under what conditions would the LTC curve be a positively sloped straight line through the origin?
- What would be the shapes of LAC and LMC curves in this case?
  - Would this be consistent with the U-shaped SAC curves?
- (b) A firm has a fixed production cost of ₹ 5,000 and a constant marginal cost of production of ₹ 500 per unit produced.
- What is the firm's Total Cost (TC) function? What is its Average Cost (AC) function?
  - Suppose the firm must pay an annual tax which is a fixed sum, independent of whether it produces any output. How does this tax affect the firm's Total Cost (TC), Marginal Cost (MC) and Average Cost? (1½+2+1½)+(2+3)
7. (a) A perfectly competitive firm faces a price of ₹ 4 and its total cost function is given by

$$C = Q^3 - 7Q^2 + 12Q + 5$$

- Determine the profit maximizing level of output.
  - Find the total profit of the firm at this level.
- (b) A competitive industry faces a demand :  $X = 800 - 8P$ .
- Each firm faces identical cost conditions  $C_i = 200 + 10X_i + 2X_i^2$ , where  $X_i$  is the output of the  $i$ th firm and  $C_i$  its cost. There is free entry and an unlimited number of potential entrants.
- What is the equilibrium output and price?
  - Find the number of firms in the industry. (2+3)+[(2+2)+1]

## Group - B

2. Answer *any five* questions :

5×5

- (a) Distinguish between the ordinary and compensated demand curve for a normal good.
- (b) "Increasing returns to scale is not consistent with a perfectly competitive market." — Justify the statement.
- (c) A risk-averse person is offered a choice between a gamble paying ₹ 1000 with probability of 0.25 and ₹ 100 with a probability of 0.75 or a payment of ₹ 325. Which one would he choose?
- (d) "Governments favour food subsidy programmes over cash grant programmes." — Is it true? Justify your answer.
- (e) How is economic rent related to elasticity of supply?
- (f) "Price control has efficiency costs."— Explain this statement by using the case of price ceiling.
- (g) Contrast risk aversion with risk loving behaviour in terms of utility function of an individual.
- (h) What is the role of substitution and income effect in determining the slope of the supply curve of labour?

## Group - C

Answer *any three* questions.

3. (a) Decompose the total effect of a price change into substitution effect and income effect for a Giffen good.
- (b) Determine the substitution effect and income effect if the two commodities are consumed in fixed proportions. 6+4
4. (a) If  $MP_L = 3$ ,  $MP_K = 4$ ,  $w = ₹ 300$ ,  $r = ₹ 480$ , what will the producer do to attain the equilibrium, when  $MP_L$ ,  $MP_K$ ,  $w$  and  $r$  have their usual meaning?
- (b) Is the customary short run average cost curve consistent with a Cobb-Douglas production function exhibiting constant returns to scale?
- (c) Is it possible for a perfectly competitive firm to maximize profit by operating on the downward sloping portion of the marginal cost curve? 2+5+3
5. (a) Consider the production function :  $Q = 5L + 10K$ ;  
where  $Q$  is the total output,  $L$  is quantity of labour employed and  $K$  is the quantity of capital employed.
  - (i) What does the isoquant look like graphically?
  - (ii) Which law does it violate?
  - (iii) What is the slope of this isoquant?

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**ECONOMICS — HONOURS**

**Paper : DSCC-4**

**(Development Economics)**

**Full Marks : 75**

*The figures in the margin indicate full marks.*

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**Group - A**

1. Answer **any ten** questions :

2×10

- (a) Mention any two indicators of economic development.
- (b) State any two challenges of developing economics.
- (c) How is income approach different from capability approach?
- (d) Define Purchasing Power Parity (PPP).
- (e) Define poverty line.
- (f) Mention any two causes of poverty in developing economies.
- (g) How can disguised unemployment be measured?
- (h) State the Kuznets' Inverted U hypothesis.
- (i) Distinguish between backward and forward linkage.
- (j) Is MPI better than HDI? Justify.
- (k) How is Gender Inequality Index a measure of economic development?
- (l) What is Sen's Poverty Index?
- (m) Mention any two roles of financial institutions in promoting economic development.
- (n) What is microfinance?
- (o) State any two functions of World Bank.

**Group - B**

2. Answer **any five** questions :

- (a) "Economic growth is necessary but not sufficient for economic development". — Explain. 5
- (b) How has economic development been explained in terms of entitlement and capabilities? 5
- (c) Describe poverty as 'Capability failure'. 5

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- (d) Discuss the process of measuring income inequality with the help of Lorenz Curve and Gini Coefficient. 5
- (e) Discuss, briefly, the formal and informal sources of rural credit.  $2\frac{1}{2}+2\frac{1}{2}$
- (f) Define financial inclusion. Mention its role in empowering rural women. 2+3
- (g) What are the main objectives and functions of World Trade Organization?  $2\frac{1}{2}+2\frac{1}{2}$
- (h) Write short notes on (*any one*) : 5×1
- (i) Multi Dimensional Poverty Index
  - (ii) Sustainable Development.

### Group - C

Answer *any three* questions.

3. Briefly explain the evolution of Development Theories. 10
4. Critically examine the Unbalanced Growth theory. 10
5. (a) What should be choice of technique in a capital-scarce developing nation?  
(b) Explain using examples when will a capital scarce developing nation choose capital intensive technology instead of labour intensive technology. 3+7
6. Critically discuss the role of microfinance in alleviating poverty. 10
7. Explain the objectives and functions of IMF. 4+6

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**ECONOMICS — HONOURS**

**Paper : SEC-3**

**(Data Analysis and Research Methodology)**

**Full Marks : 50**

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Answer *any ten* questions.

5×10

1. Define Power Query and explain its primary purpose in Excel.
2. Differentiate between complete enumeration and sample survey, highlighting their respective advantages and disadvantages.
3. List the four main steps involved in the Power Query process and briefly describe each.
4. Explain the concept of stratified random sampling and its benefits over simple random sampling.
5. Describe the practical steps involved in drawing a random sample using random number tables.
6. What are the key considerations when preparing a blank table for a field survey?
7. Outline the essential elements to be considered while designing a questionnaire for a survey.
8. Explain the process of loading Excel data into Power BI and preparing it for visualization.
9. Describe two different types of visualizations available in Power BI and explain when you might use each.
10. Explain the importance of cross-checking data after tabular representation.
11. What are the different data sources that can be connected to Power Query in Excel? Give at least three examples.
12. Explain the 'Transform' stage in Power Query and provide two examples of data transformation operations.
13. Discuss the role of units of measurement in recording and validating data.
14. Describe how Power Query can be used to clean data, giving specific examples of cleaning techniques.
15. What is Power BI Desktop and how does it differ from the Power BI Service?