

2024

## ECONOMICS — HONOURS

Paper : DSCC-1

(Microeconomics - I)

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) Higher taxes discourage work effort. Is this statement positive or normative? Explain.
- (b) Suppose you win ₹ 1,000 as prize money and you have a choice of spending the money now or keeping it in a bank for a year that pays 5% interest. What is the opportunity cost of spending the prize money now?
- (c) Give two reasons as to why a production possibility curve might shift outward.
- (d) Explain the utility-maximizing condition using cardinal approach.
- (e) Give two examples where the demand curve is upward sloping.
- (f) The demand and supply equations of a product is given below :  $Q^D = 286 - 20P$ ,  $Q^S = 88 + 40P$ , respectively. Determine the equilibrium level of output.
- (g) Explain why two indifference curves cannot intersect each other.
- (h) Justify whether the following statement is true or false :  
"If both supply and demand increase, the price of the good will always increase."
- (i) Draw a demand curve with unit elasticity and explain its shape.
- (j) What is natural monopoly?
- (k) Give two reasons why governments intervene in a market economy.
- (l) If quantity demanded of rice increased by 5% when the price of wheat increases by 20%, then what is the cross-price elasticity of demand for rice?
- (m) What do the sign of income elasticity imply about the nature of the good?
- (n) If a straight line demand curve is tangent to a curvilinear demand curve, then what can you infer about the elasticity of the two demand curves at the point of tangency?
- (o) Explain two factors that affect elasticity of supply.

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## Group - B

2. Answer *any five* questions :

- What is the relationship between average product and marginal product in short-run production by a firm?
- How is demand for a commodity affected by change in the price of related good?
- Use the law of diminishing marginal utility to explain why demand curves slope downward.
- How is cardinal utility approach different from ordinal utility approach?
- Explain the assumptions that make indifference curves negatively sloped and convex to the origin.
- Explain the statement that two countries can achieve gains from trade even if one of the countries has an absolute advantage in the production of all goods.
- Identify similarity and difference between common resources and public goods. Explain with an example of each type of good.
- Do you agree that a linear demand curve will always have different elasticity at every point on the curve? Justify your answer.

## Group - C

Answer *any three* questions.

3. (a) Consider the following data showing Shruti's total utility from consumption of two goods movie DVD and music CD. Assume that the price of each DVD is ₹ 100 and the price of each CD is ₹ 50 and Shruti has ₹ 300 to spend on the two goods.

No. of DVD	Utility from DVD	No. of CD	Utility from DVD
1	1000	1	1000
2	1800	2	1800
3	2500	3	2500
4	3000	4	3000
5	3200	5	3200

- Draw the budget line of Shruti.
  - Assuming that Shruti desires to maximize utility, what combination of movie DVD and music CD will she purchase?
  - Will she exhaust her budget?
- (b) Suppose Bihan considers red pencil to be as good as blue pencil. If price of red pencil is ₹ 2 and that of blue pencil is ₹ 1 and if he has ₹ 100 to purchase pencils, then how many red pencil or blue pencil will he purchase to maximize his utility? Illustrate your answer with the help of a diagram.

(2+3+1)+(2+2)

4. (a) Sumedha has decided always to spend one-third of her income on clothing.
- What is her income elasticity of clothing demand?
  - What is her price elasticity of clothing demand?
  - If Sumedha's tastes change and she decides to spend only one fourth of her income on clothing, how does her demand curve change? What is her income elasticity and price elasticity now?
- (b) Explain why the following might be true :

A drought around the world raises the total revenue that farmers receive from the sale of grain, but a drought only in the state of Punjab reduces the total revenue that Punjab farmers receive.

$$1\frac{1}{2} + 1\frac{1}{2} + (1+1+1) + 4$$

5. (a) The shortage of fish caused an increase in demand for protein-rich substitutes, notably soybeans. As soybeans are used in animal feed, higher soybean prices eventually were translated to higher cattle prices.

Use demand and supply diagrams to show what happened in the (i) fish (ii) soybean and (iii) cattle markets. Indicate which curve is shifted in each instance and show the effects on equilibrium price and quantity in the relevant market.

- (b) The following table shows the demand and supply of a vegetable fibre at different prices in the domestic market of India.

Price (₹)	Supply (kg)	Demand (kg)
300	2	34
600	4	28
900	6	22
1,200	8	16
1,500	10	10
1,800	12	4

(i) What is the equation for demand?

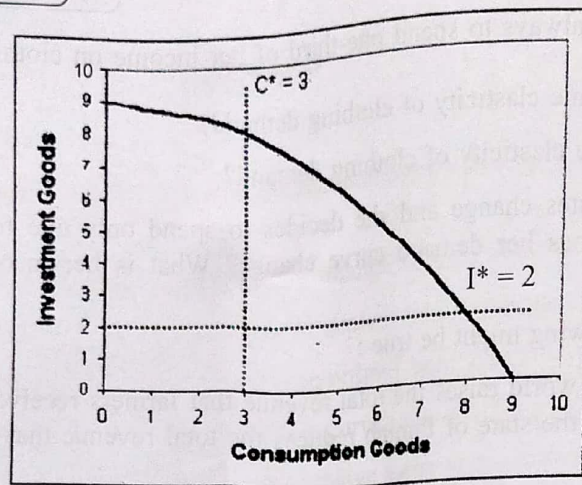
(ii) What is the equation for supply?

$$(2+2+2) + (2+2)$$

6. (a) Consider the PPF below.  $C^*$  represents the economy's subsistence level of consumption; if consumption drops below  $C^*$  then some people will starve.  $I^*$  represents the level of investment necessary to replace worn out equipment and keep the PPF in its present position. With less investment PPF will shrink next year. With more investment PPF will grow.

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Redraw the above diagram on your answer sheet. Label your graph completely. Indicate the point the economy will produce for each of the following goals :

- (i) Grow as rapidly as possible without starving its citizen.
  - (ii) Enjoy as much consumption as without allowing its PPF to shrink in future.
  - (iii) Suppose that a severe disaster forces the country's PPF to shift until it is barely possible to produce the combination of  $I^*$  and  $C^*$ . Draw the country's new PPF and answer the questions for part (i) and (ii) again.
- (b) Assume that Japan and Korea can produce both car and aeroplanes. Also assume that each country has 2400 labour hours available to produce cars and planes.

Country	Labour Hours Needed to Make One	
	Car	Aeroplane
Japan	30	100
Korea	50	150

- (i) Which country has absolute advantage in production of car?
- (ii) Which country has absolute advantage in production of aeroplane?
- (iii) Which country has comparative advantage in production of car?
- (iv) Which country has comparative advantage in production of aeroplane?
- (v) If they trade among themselves, which country will export car?

$$[1+1+(1+1+1)]+[(1+1+1+1+1)]$$

7. (a) Drinking a glass of orange juice gives you MU (Marginal Utility) of 30 utils and its price is ₹ 25. On the other hand, drinking a glass of lime soda gives you a MU of 40 utils and its price is ₹ 50. If you buy one unit of each good,

- (i) Are you maximizing your utility? Justify your answer.
- (ii) If not, how can greater total utility be obtained?

(b) Suppose Vikram spends his entire income of ₹ 5,000 on two goods namely Pizza and Burger. The price of Pizza is ₹ 100 and that of Burger is ₹ 200.

(i) Draw Vikram's budget line indicating the values of its slope and intercept.

(ii) In which situation is he better-off?

(A) If his income doubles.

(B) If price of both the goods he buys fall by half.

(C) What is the economic logic behind your answer?

[(1+2)+2]+[2+(1+1+1)]