Name: Enrolment No:	UPES UNIVERSITY WITH A PURPOSE

UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
End Semester Examination, December-January 2021-22

Course: Managerial Economics **Semester: I**
Program: MBA (CORE) **Course code: ECON1001**
Time: 03 Hours **Max. Marks: 100**

SECTION A

1. Each Question will carry 2 Marks
2. Instruction: Select the correct answer(s)

		CO
Q1	A fall in the price of a commodity, holding everything else constant, results in and is referred to as: a. an increase in demand, b. a decrease in demand, c. an increase in the quantity demanded, or d. a decrease in the quantity demanded.	**CO1**
Q2	When an individual's income falls (while everything else remains the same), that person's demand for an inferior good a. increases, b. decreases, c. remains unchanged, or d. we cannot say without additional information.	**CO1**
Q3	When the price of a substitute of commodity X falls, the demand for X a. rises, b. falls, c. remains unchanged, or d. any of the above	**CO2**
Q4	If the percentage increase in the quantity of a commodity demanded is smaller than the percentage fall in its price, the coefficient of price elasticity of demand is a. greater than 1, b. equal to 1, c. smaller than 1, or d. zero.	**CO2**
Q5	An increase in the price of a commodity when demand is inelastic causes the total expenditures of consumers of the commodity to a. increase, b. decrease, c. remain unchanged, or d. any of the above.	**CO1**
Q6	When total utility increases, marginal utility is a. negative and increasing, b. negative and declining, c. zero, or d. positive and declining.	**CO2**

Q7	Suppose that there is an increase in input prices. We would expect a. supply to increase. b. supply to decrease. c. supply could increase or decrease. d. supply to remain unchanged.	**CO1**
Q8	Demand for a good would tend to be more elastic, a. the greater the availability of complements. b. the longer the period of time considered. c. the broader the definition of the market. d. the fewer substitutes there are.	**CO2**
Q9	The production function describes the relationship between which two variables? a. inputs and cost b. inputs and revenue c. outputs and profit d. inputs and outputs	**CO1**
Q10	Which of the following industries most closely approximates the perfectly competitive model? a. Automobile, b. cigarette, c. newspaper, or d. wheat farming.	**CO2**
SECTION B 1. Each question will carry 5 marks 2. Instruction: Write short / brief notes		
Q1.	A consumer buys only two goods, X and Y. a. If the MRS between X and Y is 2 and the marginal utility of X is 20, what is the marginal utility of Y? b. If the MRS between X and Y is 3 and the marginal utility of Y is 3, what is the marginal utility of X? c. If a consumer moves downward along an indifference curve, what happens to the marginal utilities of X and Y? What happens to the MRS?	**CO1**
Q2.	Suppose that two units of X and eight units of Y give a consumer the same utility as four units of X and two units of Y. Over this range: a. What is the marginal rate of substitution over this range of consumption? b. If the consumer obtains one more unit of X, how many units of Y must be given up in order to keep utility constant? c. If the consumer obtains one more unit of Y, how many units of X must be given up in order to keep utility constant?	**CO2**
Q3.	Given that $Q = f\ (L, K)$ and $C = wL + rK.$ Derive the condition for output maximization and cost minimization.	**CO3**
Q4.	Given the following total cost schedule of a firm, Q: 0, 1, 2, 3, 4, 5 TC: 30, 50, 60, 81, 118, 180	**CO4**

	Derive the total fixed cost and total variable cost schedules of the firm and from them derive the average fixed cost, average variable cost, average total cost, and marginal cost schedules of the firm.	

SECTION-C

1. Each Question carries 10 Marks.
2. Instruction: Write long answer

Q 1.	The general linear demand for good X is estimated to be $$Q = 250,000 - 500P - 1.5M - 240 - 240P_R$$ where P is the price of good X, M is average income of consumers who buy good X, and P_R is the price of related good R. The values of P, M, and P_R are expected to be Rs. 200, Rs. 60,000, and Rs. 100, respectively. Use these values at this point on demand to make the following computations. a. Compute the quantity of good X demanded for the given values of P, M, and PR. b. Calculate the price elasticity of demand ϵ_P. At this point on the demand for X, is demand elastic, inelastic, or unitary elastic? How would increasing the price of X affect total revenue? Explain. c. Calculate the income elasticity of demand ϵ_M. Is good X normal or inferior? Explain how a four percent increase in income would affect demand for X, all other factors affecting the demand for X remaining the same. d. Calculate the cross-price elasticity ϵ_{XR}. Are the goods X and R substitutes or complements? Explain how a five percent decrease in the price of related good R would affect demand for X, all other factors affecting the demand for X remaining the same.	**CO1**
Q2	Suppose the production function of a commodity is given by $$Q = 10\sqrt{LK}$$ a. Find MP_L and MP_K? b. Find AP_L and AP_K? c. If L = 25 and K = 36, find the level of output. d. Find elasticity of output with respect to L and K? e. From c, prove that $\epsilon_{Q,L}$ and $\epsilon_{Q,K}$ is equal to 1.	**CO3**
Q3	In the year 2010-11, the demand function for maize corn in India is: $$P = 12.4 - 4Q_d$$ Where P is the farm price of maize in thousand rupee per quintal and Q_d is the quantity of maize demanded (in quintals) and supply function for maize in India is: $$P = -2.6 + 2Q_s$$ where Q_s is the quantity of maize supplied (in quintals). Determine and show graphically the equilibrium price and quantity of maize sold in Indian market in 2010-11.	**CO4**

SECTION-D

1. Each Question carries 15 Marks.
2. Instruction: Write long answer

Q1	Assume a monopoly has the following demand schedule: **Price (Rs.)** | **Quantity** 20 | 200 15 | 300 10 | 500	**CO3**

	5 | 700 a. Calculate total revenue at each P and Q combination. b. Calculate marginal revenue per unit for each decrease in price. c. For the change in price from Rs. 20 to Rs. 15, is demand elastic or inelastic? How much revenue does the firm lose from reducing the price on the 200 units it could have sold for Rs.20? How much revenue does the firm gain from selling 100 more units at Rs.15? Compare the two changes; then compare these changes with MR. d. Answer part c for the price change from Rs. 15 to Rs. 10.	
Q2	A monopoly has the following total cost function: $TC = 80 - 8Q + Q^2$ Find its equilibrium output and price and calculate its maximum profits, given that the market demand function is: $P = 96 - 3Q$	**CO4**