



Name:
Enrolment No:

UPES
End Semester Examination, December 2024

Course: Managerial Economics
Program: MBA (All)
Course Code: ECON7006

Semester: I
Time: 03:00 hrs.
Max. Marks: 100

Instructions:

- (i) **This is a CLOSED-BOOK EXAM and Calculator (Scientific or Non-scientific) is allowed.**
- (ii) **Mobile/ Tablets/ Laptops/ Books/ Notes etc. are NOT allowed.**

SECTION A
10Qx2M=20Marks

S.N.	Question	Marks	CO
Q.1	During a recession, economies experience increased unemployment and a reduced level of activity. How would a recession be likely to affect the market demand for new cars? (a) Demand will shift to the right. (b) Demand will shift to the left. (c) Demand will not shift, but the quantity of cars sold per month will decrease. (d) Demand will not shift, but the quantity of cars sold per month will increase.	2	CO 1
Q.2	If a good is inferior, then (a) The income elasticity of demand will be negative. (b) The income elasticity of demand will be zero. (c) The income elasticity of demand will be positive. (d) A decrease in income will cause demand to decrease.	2	CO 1
Q.3	A perfectly competitive firm should reduce output or shut down in the short run if market price is equal to marginal cost and price is (a) Greater than average total cost. (b) Less than the average total cost. (c) Greater than average variable cost. (d) Less than average variable cost.	2	CO 1
Q.4	If an input is owned and used by a firm, then its (a) Explicit cost is zero. (b) The implicit cost is zero. (c) Opportunity cost is zero. (d) Economic cost is zero.	2	CO 1
Q.5	The tendency for managers to operate a firm in a way that maximizes their personal utility rather than the firm's profits is referred to as the (a) Consumer utility incentive. (b) Principal-agent problem.	2	CO 1

	(c) Hidden agenda scenario. (d) Modigliani hypothesis.		
Q.6	The output elasticity of labor is (a) Equal to one at the level of output where the average product is at a maximum. (b) The percentage change in labor required to produce one more unit of output. (c) Equal to the ratio of total product to the quantity of labor employed. (d) A measure of the percentage change in output that can result when the quantity of labor is held constant.	2	CO 1
Q.7	An isoquant that is (a) Further from the origin represents greater output. (b) Flatter represents the trade-offs between inputs that are poor substitutes. (c) Negatively sloped represents input combinations associated with Stage I of production. (d) All of the above are correct.	2	CO 1
Q.8	If average cost is at a minimum, then (a) It is equal to marginal cost. (b) Total cost is also at a minimum. (c) Profit is at maximum (d) All above.	2	CO 1
Q.9	When total revenue is at a maximum (a) Average revenue is at a maximum. (b) Marginal revenue is at a maximum. (c) Average revenue is equal to zero. (d) None of the above is correct.	2	CO 1
Q.10	If the demand curve for a firm's output is perfectly elastic, then the firm is (a) A monopolist. (b) Perfectly competitive. (c) An oligopolist. (d) Monopolistically competitive.	2	CO 1

SECTION B
4Qx5M= 20 Marks

Q.11	Consider the data in the table below and determine equilibrium Price and Quantity and show the same graphically.																													
	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="border: none;"></th> <th style="border: none; text-align: center;">S0</th> <th style="border: none; text-align: center;">D0</th> </tr> <tr> <th style="border: none; text-align: center;"><i>Price</i></th> <th style="border: none; text-align: center;"><i>Quantity supplied</i> $Q_s = -400 + 20P$</th> <th style="border: none; text-align: center;"><i>Quantity demanded</i> $Q_d = 1,400 - 10P$</th> </tr> </thead> <tbody> <tr> <td style="border: none; text-align: center;">140</td> <td style="border: none; text-align: center;">2,400</td> <td style="border: none; text-align: center;">0</td> </tr> <tr> <td style="border: none; text-align: center;">120</td> <td style="border: none; text-align: center;">2,000</td> <td style="border: none; text-align: center;">200</td> </tr> <tr> <td style="border: none; text-align: center;">100</td> <td style="border: none; text-align: center;">16,00</td> <td style="border: none; text-align: center;">400</td> </tr> <tr> <td style="border: none; text-align: center;">80</td> <td style="border: none; text-align: center;">12,00</td> <td style="border: none; text-align: center;">600</td> </tr> <tr> <td style="border: none; text-align: center;">60</td> <td style="border: none; text-align: center;">8,00</td> <td style="border: none; text-align: center;">800</td> </tr> <tr> <td style="border: none; text-align: center;">40</td> <td style="border: none; text-align: center;">4,00</td> <td style="border: none; text-align: center;">1,000</td> </tr> <tr> <td style="border: none; text-align: center;">20</td> <td style="border: none; text-align: center;">0</td> <td style="border: none; text-align: center;">12,00</td> </tr> </tbody> </table>		S0	D0	<i>Price</i>	<i>Quantity supplied</i> $Q_s = -400 + 20P$	<i>Quantity demanded</i> $Q_d = 1,400 - 10P$	140	2,400	0	120	2,000	200	100	16,00	400	80	12,00	600	60	8,00	800	40	4,00	1,000	20	0	12,00	5	CO 2
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Q.12	Write the concepts of Average Cost, Average Fixed Cost and Average Variable Cost with suitable example. Use appropriate diagrams to support your answer.	5	CO 2
Q.13	Measure the price elasticity value on different points of a linear demand curve.	5	CO 2
Q.14.	Explain the concepts of Indifference curve and depict equilibrium of indifference curve analysis, also write the conditions of equilibrium.	5	CO 2

SECTION-C
3Qx10M=30 Marks

Q.15	Explain under which conditions a perfectly competitive firm earns excess profit. How can the excess profit condition end? Use appropriate diagrams to support your answer.	10	CO 3														
Q.16	A firm's total-revenue and total-cost functions are $TR = 4Q$ $TC = 0.04Q^3 - 0.9Q^2 + 10Q + 5$ (a) Determine the best level of output. (b) Determine the total profit of the firm at its best level of output.	10	CO 3														
Q.17	The following table represents the production of a firm as it increases the quantity of labor employed while keeping all other factors constant: <table border="1" style="margin: 10px auto;"> <thead> <tr> <th>Total Output (Q)</th> <th>Units of Labor (L)</th> </tr> </thead> <tbody> <tr><td>10</td><td>1</td></tr> <tr><td>22</td><td>2</td></tr> <tr><td>33</td><td>3</td></tr> <tr><td>40</td><td>4</td></tr> <tr><td>44</td><td>5</td></tr> <tr><td>46</td><td>6</td></tr> </tbody> </table> (a) Calculate the Marginal Product and Average Productivity of Labor for each additional unit of labor and complete the table. (b) Identify the stage where the law of diminishing returns sets in and explain why. Use diagrams to support your answer.	Total Output (Q)	Units of Labor (L)	10	1	22	2	33	3	40	4	44	5	46	6	10	CO 3
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SECTION-D
2Qx15M= 30 Marks

Q.18	The general linear demand for good X is estimated to be $Q_d = 250,000 - 500P - 1.50M - 240PR$ where P is the price of good X, M is average income of consumers who buy good X, and PR is the price of related good R. The values of P, M, and PR are expected to be \$200, \$60,000, and \$100, respectively. Use these values at this point on demand and solve the following questions. (a) Compute the quantity of good X demanded for the given values of P, M, and PR.	15	CO 4
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	<p>(b) Calculate the price elasticity of demand E. 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.</p> <p>(c) Calculate the income elasticity of demand EM. Is good X normal or inferior? Explain how a 4 percent increase in income would affect demand for X, all other factors affecting the demand for X remaining the same.</p>		
	Solve any one from below [Q.19 OR Q.20]		
Q.19	<p>The Rapid Transit Corporation in a city has estimated the following Cobb-Douglas production function using monthly observations for the past two years:</p> $\ln Q = \ln 10 + 0.40 \ln K + 0.60 \ln L + 0.20 \ln G$ <p style="text-align: center;">(3.40) (4.15) (3.05)</p> <p>Given: $R^2=0.90$</p> <p>Where Q is the number of bus miles driven, K is the number of buses the firm operates, L is the number of bus drivers it employs each day, and G is the gallons of gasoline it uses. The numbers in parentheses below the estimated coefficients are t-values. With respect to the above results, answer the following questions:</p> <p>(a) Estimate Q if $K = 200$, $L = 400$, and $G = 4,000$.</p> <p>(b) Rewrite the estimated production function in the form of a power function and explain the Total Factor Productivity (TFP) value.</p> <p>(c) Find the marginal product and average product of capital, labor, and gasoline at $K = 200$, $L=400$, and $G=4,000$. Which stage of production is operational? Why?</p>	15	CO 4
Q.20	<p style="text-align: center;"><u>CASE</u></p> <p style="text-align: center;">Non-clearing Financial and Other Markets</p> <p>In the markets, an excess demand for a commodity is automatically eliminated by a price rise and an excess supply is eliminated by a price decline. Markets clear by quantity responses to price changes resulting from a disequilibrium. Some real-world markets, however, do not clear and do not seem to move toward clearing. For example, financial markets (especially credit markets) often do not clear. That is, we often observe excessive demand or excessive supply of credit that persists over time. A non-clearing market can also exist in labor, commodities, and other markets.</p> <p>A non-clearing market arises when economic agents react to both price signals (as in traditional theory) and quantity signals. Economic agents sometimes deliberately create a disequilibrium situation because of the advantages that they can extract from the persistence of a surplus or a shortage of the commodity or service that they sell or buy. One of the main insights of non-clearing markets</p>		

theory is that a disequilibrium in one market can create desirable spillover effects in a related market. For example, ticket prices for concerts by a superstar, such as Bruno Mars, are often deliberately set below the equilibrium price to create a shortage (i.e., excess demand) for tickets. Long lines form in front of ticket booths long before tickets go on sale, and all available tickets are quickly sold out as soon as they do go on sale. The news media report on the long lines to get tickets and interview some of the people camped outside ticket booths days before the tickets go on sale, fans talk about the hot concert coming up, and an aura of anticipation and success is created.

Promoters play this price game in the expectation that all the “hype” about the concert and the free publicity that it gets will lead to much greater sales of the star’s recordings, and that these spillovers will more than make up for the loss of revenue by pricing concert tickets below the equilibrium level. The same occurs in pricing admission tickets to Disneyland or meals at a chic restaurant. Lines in front of the new restaurant and word of mouth are the best and cheapest forms of advertising that the restaurant could have. Most people believe that if it is difficult to get into the restaurant, it must be great. These and other examples of non-clearing markets do not mean that the traditional theory of clearing markets examined in this chapter is wrong, but only that the traditional theory is not applicable in some cases where shortages or surpluses are deliberately created and tend to persist over time. The theory of non-clearing markets acknowledges this fact and tries to explain it. In the ticket example above, excess demand for tickets is fully and voluntarily planned by the price-maker or promoter as a way to increase overall or combined revenues from the concert and the sales of the star’s recordings.

Questions

- (a) Why and how can disequilibrium (excess demand or supply) persist in a market economy?
- (b) Why would a firm set a price for the product or service it sells below equilibrium if this means selling a smaller quantity at a lower price (and hence making a lower profit, or even incurring a loss, than by selling the product or service at the equilibrium price)?
- (c) What determines if the firm gains (and therefore has an incentive) to set the price below the equilibrium level?
- (d) If firms playing this game (i.e., setting the price below the equilibrium level) benefit, why would your firm or any firm also adopt this strategy and also earn a higher profit?
- (e) If your firm could set the price of the product or service it sells below the equilibrium price and increase its profit, would you, as the CEO of the firm, adopt this strategy? Should the government introduce legislation to make this practice illegal?