

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

Supplementary Examination- 2026

B.Tech-III Semester (All Branches)

COURSE CODE(CREDITS):25B11HS311(3)

MAX. MARKS: 75

COURSE NAME: Economics

COURSE INSTRUCTORS: TGM, ASA

MAX. TIME: 2 Hours

Note: (a) All questions are compulsory.

(b) The candidate is allowed to make Suitable numeric assumptions wherever required for solving problems

(c) Use of calculator is allowed

Q.No	Question	CO	Marks														
Q1	Describe briefly the four economic resources. How is India placed with respect to these resources?	1	3+2														
Q2	Elaborate on the flaws of capitalism as an economic system.	1	4														
Q3	“Demand and supply interaction creates market equilibrium.” Elucidate with a graph. Show how equilibrium shifts with shift in demand curve.	3	5														
Q4	Derive the demand curve from the following data. <table><tr><th>Price per unit</th><th>Quantity Demanded (No. of units)</th></tr><tr><td>\$1.80</td><td>320</td></tr><tr><td>2.00</td><td>300</td></tr><tr><td>2.20</td><td>270</td></tr><tr><td>2.40</td><td>230</td></tr><tr><td>2.60</td><td>200</td></tr><tr><td>2.80</td><td>180</td></tr></table>	Price per unit	Quantity Demanded (No. of units)	\$1.80	320	2.00	300	2.20	270	2.40	230	2.60	200	2.80	180	2	6
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Q5	The demand curve for product is given as $Q = 500 - 5P$. Calculate the a) Quantity demanded at a price of Rs.15. b) Price elasticity of demand at a price of Rs.20 c) Price at which the total revenue is maximum?	3	1+2+2														
Q6	Differentiate between cardinal and ordinal approaches to consumer behavior. Give examples in support of your answer.	3	5														
Q7	Given a production equation : $Q = 100K^{0.5}L^{0.5}$, $w=30$ and $r=50$. Determine the expansion path for this organization. How many units of capital and labor will be used to get an output of 1000 units efficiently? What will be the cost of production at this point?	3	4+2+2														
Q8	If the total cost equation of a firm is given as $100+60Q-12Q^2+Q^3$, derive the marginal cost, average cost and average variable cost equations. At what quantity is the average variable cost minimum?	3	3+2+2														

	If the fixed cost is increased to Rs. 200, how is the minimum of average variable cost affected? Show the detailed calculation.		
Q9	<p>a) What are the parameters on which market structures are defined? Explain briefly the four types of market structures using these parameters.</p> <p>b) The industry supply and demand functions for pizza in a town are given by the following equations. $Q_D = 10000 - 1000P$ $Q_S = -2000 + 1000P$ Determine the equilibrium price and quantity of pizza. What is the price any firm will be able to sell at if this market is in perfect competition? Plot the graph for a firm's demand and marginal revenue curve.</p>	4	<p>(3+4)</p> <p>(3+2+1+2)</p>
Q10	<p>a) Demand for a monopolist is given by $P = 1100 - 40Q$ Marginal cost is constant and equal to Rs. 100.</p> <p>a. What are the profit maximizing price and output?</p> <p>b. What is the deadweight loss resulting from Lyon's monopoly?</p> <p>c. Compared to pricing at marginal cost, how much income is redistributed from consumers to the owners of monopoly?</p>	4	5+5+5