

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -3 EXAMINATION- 2025

B.Tech- VI Semester (CSE/IT/ECE/CE/BT/BI)

COURSE CODE (CREDITS): 23B1WHS631 (3)

MAX. MARKS: 35

COURSE NAME: Engineering Economics

COURSE INSTRUCTORS: Dr. Bilal Khan (BLK)

MAX. TIME: 2 Hours

Note: (a) All questions are compulsory. (b) Use of Calculators is allowed.

(c) Question no. 6 is choice-based question. Attempt only one.

Q. No	Question	CO	Marks
1.	<p>A monopolist sells his output in two different markets. His demand (O) and cost functions (TC) are as follows:</p> <p>Market I: $Q_1 = 100 - 2P_1$</p> <p>Market II: $Q_2 = 150 - 3P_2$</p> <p>TC = $1000 + 10Q (Q_1 + Q_2)$</p> <p>Find:</p> <p>(a) What is the profit maximizing level of output (Q) produced by the monopolist (i) with discrimination, and (ii), without discrimination?</p> <p>(b) What price (P) will the monopolist charge: (i) with discrimination, and (ii) without discrimination.</p> <p>(c) Compare the profit differentials (II) between the discriminated market and non-discriminated market.</p> <p>(d) Calculate the elasticity of demand (E_d) in discriminated markets.</p>	CO4	8
2.	<p>Suppose that there are two firms in a duopoly form of market. The demand (Q) and cost functions (C) of these two duopolistic firms are as follows:</p> <p>$P = 180 - 0.4 (Q_1 + Q_2)$</p> <p>$C_1 = 8Q_1$ & $C_2 = 0.5Q_2^2$</p> <p>Using the Cournot solution, find:</p> <p>[Note: Do your calculations up to two decimal places only]</p> <p>(a) The equilibrium quantities for both the firms and price level.</p> <p>(b) The differences in profit levels for both the firms.</p> <p>(c) Show that a rise of either duopolist's output level will cause a reduction in optimum output of the other duopolist.</p>	CO4	7

3.	<p>Assume that the two duopolistic firms in the above question no. (2), now decide to form a cartel with the purpose of joint-profit maximization. Further, assuming that there is no change in the demand and cost functions for both the firms,</p> <p>Find the following using the Collusion solution:</p> <p>(a) Compare the equilibrium quantities for both the firms and price level, with the Cournot solution.</p> <p>(b) Compare the profit differences for both the firms, with the Cournot solution.</p> <p>(c) Compare the changes in joint profit levels and changes in each duopolist profit levels with the Cournot solution.</p>	CO4	7
4.	<p>(a) Identify the advantages and disadvantages of adopting a fixed exchange rate regime versus a floating exchange rate regime for a developing country aiming to attract foreign investment.</p> <p>(b) Suppose there is appreciation of currency of Country A significantly, Predict and explain the potential effects on its export sector and overall trade balance.</p>	CO5	3+3=6
5.	When is Balance of Payments (BOP) said to be balanced or in equilibrium condition? Discuss Quotas and Tariffs as a measure to correct disequilibrium in BOP.	CO5	3
6.	<p>What is shut down point condition for a firm in perfect competition? Show the equilibrium of industry in short run under perfect competition.</p> <p style="text-align: center;">OR</p> <p>Discuss the four measures of Money Supply.</p>	CO5	4