GALGOTIAS UNIVERSITY

ADMISSION NUMBER												

School of Finance and Commerce

Bachelor of Business Administration in Financial Investment Analysis
Mid Term Examination - May 2024

Duration : 90 Minutes
Max Marks : 50

Sem II - H1UB203T - Business Mathematics

General Instructions
Answer to the specific question asked
Draw neat, labelled diagrams wherever necessary
Approved data hand books are allowed subject to verification by the Invigilator

1)	Write down the condition for addition and subtraction of matrices.	K2	(2)
2)	Explain different types of matrix with example.	K1	(3)
3)	Explain the square matrices and it's types.	K2	(4)
4)	A publishing house find that the cost of production directly attributed to each book is Rs. 30 and fixed costs are Rs. 15,000. If each book can be sold for Rs. 45, then determine : (i) The cost function ii) Revenue Function and iii) Revenue Function iv) Break Even Point	K2	(6)
5)	Find the equilibrium point if the supply and demand equation of a product are Xs = 2p - 8 and Xd = 300 - 2p, respectively.	K3	(6)
6)	The total revenue received from the sale of x units of a product is given by R(x)= 200+x^2/5. Find: i) The average revenue ii) The marginal revenue iii) The marginal revenue when, x= 25 iv) The actual revenue from the sale of twenty sixth unit	K3	(9)
7)	A bottle manufacturing company introduces production bonus to the workers that increases the cost of bottle. The daily cost of production C for x bottle is given by C(x) = 100x + 45,000. i) If each bottle is sold for Rs 250, determine the minimum number that must be produced and sold daily to ensure no loss. ii) If the selling price is increased by Rs 50 per piece, what would be the break-even point? iii) If it known that at least 450 bottles can be sold daily, what price the company should charge as per piece of pen to guarantee no loss?	K4	(8)
8)	Solve the following systems of equation by using Cramer's Rule: 2x-3y-4z=29 -2x+5y-z=-15 3x-y+5z=-11	K4	(12)

OR

	If a manufacture's total revenue function is C = 2x2 + 3, find a.the average revenue function, b. the marginal revenue function, and c. the marginal revenue when 4 units are sales. Interpret the result.	K4	(12)