JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -1 EXAMINATION- 2026

BBA V Semester

COURSE CODE (CREDITS): 24BB1HS512 (4) MAX. MARKS: 15

COURSE NAME: QUANTITATIVE TECHNIQUES FOR MAAGEMENT

COURSE INSTRUCTOR: ASA MAX. TIME: 1 Hour

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	Solve the LP given problem using Big-M method: **Minimize Z = $4x_1 + x_2$;** subject to constraints: $3x_1 + x_2 = 3$; $4x_1 + 3x_2 \geq 6$; $x_1 + 2x_2 \leq 4$ $x_1, x_2 \geq 0$	3	7
Q2	A furniture manufacturer produces two products — Tables and Chairs every day. The relevant business conditions are: • Due to a standing supply contract, the company must produce exactly 50 units (tables + chairs combined) per day — no more, no less. • The total labour hours available restrict production such that twice the number of tables plus the number of chairs cannot exceed 80 hours per day. • Due to a retailer's minimum order commitment, the company must produce at least 10 tables per day. • The profit contribution is ₹40 per table and ₹30 per chair. The manager wants to determine the daily production mix of tables and chairs that maximizes total profit, while satisfying all the above conditions. Formulate the LP and solve it graphically.	2	5
Q3	What do you understand by an LP model? What are its advantages and limitations?	1	3

39