JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -3 EXAMINATION- 2025

m.Tech-1st Semester (CE-Structural Engineering)

COURSE CODE (CREDITS): 25M11CE111 (3) MAX. MARKS: 35

COURSE NAME: Design of Reinforced Concrete Structures

COURSE INSTRUCTORS: Dr. KAUSHAL KUMAR 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) Scientific Calculator, IS456:2000, IS 3370: 2009 are allowed.

Q.No	Question	CO	Marks
Q1	Design the interior panel of a flat slab with following data: Size of floor = 20 m x 20 m Size of panels = 5 m x 5 m Live load = 4 kN/m^2 Size of Column = 500 mm diameter. Use M20 concrete and Fe 415 bars. Drops are provided	4	10
Q2	Analyse an equilateral triangular Isotropically reinforced simply supported slab subjected to Udl over entire area. Use yield line pattern and by virtual work method.	4	5
Q3	Design a rectangular beam, continuous over four column supports of effective span of 6 m. The beam is subjected to an imposed load of 10kN/m and live load of 15 kN/m. Use M20 and Fe415 steel.	3	10
Q4	Design a circular water tank with flexible base for a capacity of 450 kl. The depth of water us 4.5 m. Allow suitable water board.	5	10