12/9.30

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -1 EXAMINATION- 2025

B.Tech-V Semester (CE)

COURSE CODE (CREDITS): 18B11CE515 (4) MAX. MARKS: 15

COURSE NAME: DESIGN OF CONCRETE STRUCTURES

COURSE INSTRUCTORS: Dr. Tanmay Gupta 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. Use of IS 456 is allowed.

Q.No	Question	CO	Marks
Q1	Define characteristic strength (f_{ck}) of concrete. For a residential building, suggest the relevant types of loads to be considered.	1	3
Q2	Draw stress-strain curve of steel bars with or without definite yield point and indicate the yield stress f_y of them.	1	4
Q3.	What do you understand by term Limiting Moment of Resistance Factor (R_{lim}). Show the relevant calculations to find its value and in tabular form give all relevant values.	1	4
Q4.	Determine the moment of resistance of a rectangular beam of section 160mm X 360mm, having reinforcement of 3 numbers of 14mm bars, effective cover 40mm, with grade of concrete M15 and grade of steel as FE 250.	2	4