JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -1 EXAMINATION- 2024

B.Tech-VIII Semester (CE)

COURSE CODE(CREDITS): 18B1WCE831 (3) MAX. MARKS: 15

COURSE NAME: ADVANCED REINFORCED CONCRETE DESIGN

COURSE INSTRUCTORS: KAUSHAL KUMAR MAX. TIME: 1 Hour

Note: (a)All questions are compulsory.
(b)Marks are indicated against each question in square brackets.
(c) The candidate is allowed to make Suitable numeric assumptions wherever required for solving problems

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Q1. Define : ***CO-1*** ***[1x4 = 4 Marks]***

(a) Working Stress Method
(b) Factor.of Safety
(c) Permissile Stress
(d) Design Loads in Working Stress Method

Q2. Determine moment of resistance and uniformly distributed super-imposed load carried by a simply supported singly reinforced R.C. beam having effective span 5m and a cross section of 300 x 555 (b x d) reinforced with 5ϕ20. Use M 15 concrete and Fe 250 steel using working stress method. ***CO-1*** ***[5 Marks]***

Q3. Determine the moment of resistance of a T-beam having flange width of 750 mm and thickness of the flange as 125 mm. The breadth of the web is 260 mm and the effective area of tensile steel is 1250 mm2 placed at an effective depth of 360 mm. Take m = 19 and scbc = 5 N/mm2. Also calculate the maximum uniformly distributed load the beam can carry over an effective span of 4 m. (Using WSM) ***CO-1*** ***[6 Marks]***

The End