Seat No: Enrollment No:

PARUL UNIVERSITY

FACULTY OF ENGINEERING & TECHNOLOGY

B.Tech. winter 2019 - 20 Examination

Semester: 5 Date: 28/11/2019
Subject Code: 03104303 Time: 10:30am to 1:00pm
Subject Name: Structural Design-I Total Marks: 60

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Instr	uctions:
	actions.

- 1. All questions are compulsory.
- 2. Figures to the right indicate full marks.
- 3. Make suitable assumptions wherever necessary.
- 4. Start new question on new page.

 Q.1 Objective Type Questions (Each of one mark) 1. For RCC design, which code we are using? A) IS 800: 2007 B) IS 1893: 2002 C) IS 875 (Part-): 2015 D) IS 456: 2000 2. In singly reinforced beam, reinforcements are in which zone? A) Compression B) Tension C) Tension and Compression both D) None 3. Basic value of span to depth ratio for simply supported beam up to 10 m span is	(1	15)
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characteristic dead load of 18 kN/m and live load of 12 kN/m in addition to its self-weight.		
Design the beam for flexure at mid span. Use M20 and Fe415.		

- A) A simply supported rectangular beam of 8 m span carries a udl of 23 kN/m inclusive of its selfweight. Determine the reinforcement for flexure. Use M30 and Fe 415.
- B) Design the slab of the room for residential building of size $3 \text{ m} \times 6.5 \text{ m}$ clear. The slab is supported on masonry walls of thickness 350 mm. Live load shall be 2 kN/m^2 . Materials are M20 and Fe415. No need to perform checks.