CEM51 Structural Engineering

569

REG. NO

OCTOBER 2021

Time: Three hours Maximum Marks: 75

Note:
1. Answer ALL the questions in PART-A (1 mark each)
2. Answer any ONE question from each unit in PART-B (3 marks each)
3. Answer any ONE question from each unit in PART-C (10 marks each)
4. IS 456 – 2000, IS 800 – 2007 and Structural Engineering Hand book and Steel Tables are permitted.
5. The question paper contains TWO Pages

PART-A (1x10=10)

1. What do you meant by modular ratio?
2. What are the different grades of steel used in concrete?
3. When the L-beam is provided.
4. What is balanced section?
5. What is the maximum size of bar in slab as per IS:456-2000 code provision?
6. How the width of stair is decided?
7. What is slenderness ratio?
8. When the isolated footing is provided?
9. What is the expansion of ISHB?
10. When a section is called as slender?

PART-B (3x5=15)

UNIT-I

11. What are the assumptions made in working stress method?
12. What are advantages of Limit State Method?

UNIT-II

13. What is 'T' beam and write the formula to calculate the effective width of flange of 'L' beam?
14. What are the different forms of shear reinforcement and which type of shear reinforcement is having more advantage, Why?

UNIT-III

15. What is slab and classify their types with respect to side's ratio and support conditions?
16. Why the torsional reinforcement is provided in a two way slab?

UNIT-IV

17. Write the code provisions regarding diameter and pitch of transverse reinforcement.
18. What are the basic requirements of a column footing?

UNIT-V

19. What is tension member and specify their different forms?
20. Why the ISHB section is suitable than ISLB for compression member?