SAMPLE PRACTICE QUESTIONS

STRUCTURAL DESIGN-I

1. Write the necessity of doubly reinforced section?
2. What do you mean by development length ?
3. One way slab Vs Two way slab.
4. What is the advantage of T-beam?
5. What do you mean by grade of steel?
6. Define characteristic strength.
7. Explain under-reinforced section.
8. What is effective cover? .
9. Define bond and What are the types of bond?
10. Write the forms of shear reinforcement.
11. What are the types of Limit States
12. Write the assumption in Limit state of collapse.
13. State the different methods of design of concrete structures.
14. Write down the assumptions in WSM.
15. Explain types of limit state.
16. Differentiate between LSM & WSM .
17. Write the grades of concrete and steel.
18. Write the advantages and disadvantages of W.S.M.
19. A RCC section 250mm*600mm overall is reinforced with 4-25mm bars it is simply supported on an effective span of 6m.Determine the maximum UDL beam can carry. Use M30 & Fe500
20. Design a rcc slab for a room 6.3m*4.5m . The slab to be cast monolithically over the beams with its sides simply supported. It has to carry a characteristics load of 10 kN/m2 in addition to its own weight. Use M25 7 Fe415.

21. Describe the MR of T-beam when neutral axis is within flange area with stress block diagram.
22. Find the MR of steel provided is 4bars of 16mm diameter in a beam 300*500mm effective. M20 & Fe500 are used.
23. Design a beam to carry a working moment of 80 Kn-m, using M20 grade concrete & Fe415 steel.