

B.Arch. Sixth Semester (Old)
Structure - VI : 6 SA 3

P. Pages : 1

Time : Three Hours



AU - 3129

Max. Marks : 40

- Notes :
1. Due credit will be given to neatness and adequate dimensions.
 2. Assume suitable data wherever necessary.
 3. Illustrate your answer necessary with the help of neat sketches.
 4. I.S.I. Hand book for structural Steel section, I.S. Code 800/1962 or 1964, I.S. 456 (Revised) I.S. 875 may be consulted.

1. Design a simply supported T-beam for following data: 13
 Span = gm; Spacing of beam = 3m c/c Slab thickness = 100mm;
 Imposed load = 6kN/m^2
 Use M20 concrete and Fe415 steel

OR

2. A column 450mm x 450mm in size carries an axial load of 900kN. Design a footing to 13
 support the column. The safe bearing capacity of the soil is 180kN/m^2 . Use M20 concrete
 and Fe415 steel.
3. Design a circular water tank for the following requirements: 14
 i) Diameter of tank = 6m
 ii) Depth of water = 4m
 iii) Tank rest on ground and joint between wall and floor is flexible Use M20 concrete
 and Fe415 steel.

OR

4. Design circular water tank for 2,00,000 liters capacity resting on ground. The joint 14
 between floor and wall is rigid. Use M20 concrete and Fe415 steel.
5. a) Explain the importance of bonds in case of load bearing buildings. 6
 b) Explain significance seismic zoning of India with suitable sketch. 7

OR

6. Explain the following terms: 13
 i) Strength
 ii) Stiffness
 iii) Ductility
 iv) Soft storey
