

QUESTION BANK

STRUCTURAL ANALYSIS – II

Two marks Questions

1. Define Lack of fit.
2. What are statically indeterminate structures.
3. Differentiate between Pin-jointed & Rigid-jointed structures?
4. Briefly explain degree of freedom of a structure.
5. Differentiate between statically determinate structures & statically indeterminate structures.
6. Briefly explain degree of freedom of a structure.
7. What do you mean by Pure Sway & General Sway?
8. Give the slope deflection equations to calculate final end moments for both the ends, If both the ends of the beam are fixed.
9. Give the formula to calculate fixed end moments, if a fixed beam is applied by a moment at the centre.
10. If one end of a member is hinged or pinned and other end is fixed, than relative stiffness is taken as.....?
11. Give the slope deflection equations to calculate final end moments for both the ends, If both the ends of the beam are fixed.
12. Give the formula to calculate fixed end moments, if a fixed beam is applied by a moment at the centre.
13. Give the formula to calculate Rotation factor & Distribution factor.
14. Define
 - (i) Distribution Theorem (ii) Carry over Theorem.
15. Name the approximate methods used in practice for the analysis of frames?
16. State the various assumptions of Cantilever method.
17. If an end of a member is hinged or pinned, relative stiffness is taken as.....?
18. Define Influence Line Diagram. Give any two uses of Influence Line Diagram?

19. Write clapeyron's theorem of three moments for point load & for uniformly distributed load.
20. Give the formula to calculate fixed end moments, if a fixed beam is applied by a moment at the centre.
21. The Relative stiffness of a member at a joint, whose farther end is hinged or simply supported is?
22. The Slope deflection method is used to determine (Statically Determinate structures / Statically Indeterminate structures).
23. Consider a simply supported beam of span 10 m carrying a point load of 5 kN at the center. Calculate reactions at supports and bending moment at centre.
24. Differentiate between static indeterminacy and kinematic indeterminacy .Explain in detail.
25. Draw Stress –Strain curve for Ductile, Brittle, Rigid material.
26. Explain in details with proper diagrams sway and non-sway types of frames.
27. Define Lack of Fit.