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Important Questions

Steel Structures Design

Q.1 what is steel? and what are the main components of steel?

Q.2. what are the advantages & disadvantages of steel as a structural material?

Q.3. Explain Mechanical properties of steel?

Q.4. what is IS:800?

Q.5. List the properties of structural steel?

Q.6. Define twisted bar?

Q.7. what is the meaning of MIs?

Q.8. write Unit weight of steel?

Q.9. what is the meaning of ISLC?

Q.10 what is yield stress of steel?

Q.11 what are the units of shear stress?

Q:12. Define Rivet? list and sketch neatly different types of riveted Joints?

Q:13. what is shank of a rivet?

Q:14 Define gusset plate?

Q:15. what is the role of tacking rivets?

Q:16. give the Name of two type of riveted Joint?

Q:17. Difference b/w lap joint and butt joint?

Q:18. How can you designate I-sections

Q:19. Explain the terms:-
a) Edge distance and b) gauge of rivets?

Q:20 Define gross diameter of a rivet?

Q:21 Define terms:-

- 1) Permissible stresses
- 2) Efficiency of a riveted Joint?

Q:22. Define welded connections? and types of welds?

Q:23 Advantages & Disadvantages of welded Joints?

Q:24. Define terms' -

- a) Butt weld
- b) fillet weld

Q:25. Reinforcement in welded connections?

Q:26. what is dead load?

Q:27 Define modular ratio?

Q:28. write formula of Slenderness ratio?

Q:29. Explain testing and Inspections of welded Joints?

Q:30 How would you Calculate the strength of fillet weld Joint?

Q:31 why a tension Member is spliced?

Q:32. Explain various types of sections used as tension members?

Q:33 Define Net sectional area?

Q:34 Define radius of gyration.

Q:35 Explain various types of Column Bases with diagram?

Q:36. Difference B/w Long column & short column?

Q:37. Define struts, columns, Boom?

Q:38. Define discontinuous strut?

Q:39. Define effective length?

Q:40 Define Beam?

Q:41 what are laterally restrained beams?

Q:42 what is plate girder?

Q:43 write the assumptions of simple bending?

Q:44 Explain various types of roof truss?

Q:45 Define buckling? and spacing of trusses?

Q:46 Define terms:-

- a) Bending Moment
- b) Moment of Inertia.
- c) Effective span
- d) Shear Force
- e) Shear Stresses
- f) Moment of Resistance