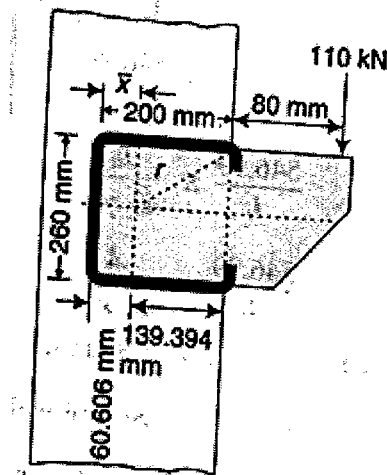
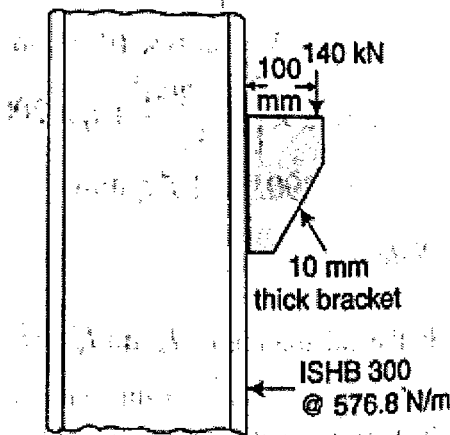




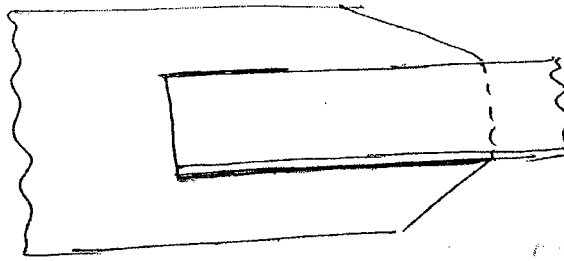
1. Write the advantages and disadvantages of steel structures?
2. Explain in detail different welding processes with neat sketches?
3. List out the advantages and disadvantages of welding?
4. Explain in detail classification of welds with neat sketches?
5. A Bracket plate welded to the flange of a column ISHB 300@618 N/m as shown in figure. Calculate the size of fillet weld required to support a factored load of 110 kN. Assume Fe410 grade steel and shop welding?



6. A Bracket plate of 10 mm thick is used to transmit a reaction of 140 kN at an eccentricity of 100 mm from the column flange as shown in figure. Design the fillet weld if it is shop welded?

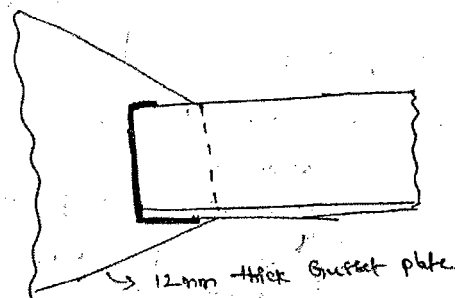


7. A tie member of a truss consists of double angle section, each having ISA 80x80x8 welded on the opposite side of a 12 mm thick gusset plate as shown in figure. Design a fillet weld for making the connection in the work shop. The factored tensile force in the member is 300 kN. Grade of steel is Fe410?



8. A tie member consisting of an ISA 80x80x8 section of Fe410 grade steel is connected to a 12 mm thick gusset plate at site. Design a suitable fillet weld to carry a load equal to the design strength of the member?

9. Design the fillet weld for the angle section as shown in figure if the weld is to be done on its three sides. Grade of steel is Fe410 and use ISA 80x50x8?



10. Design a bracket connection to transfer an end reaction of 225 kN due to factored loads as shown in figures. The end reaction from the girder acts at an eccentricity of 300 mm from the face of the column flange. Design welded connection using steel of grade Fe410?

