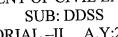
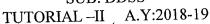
KALLAM HARANADHAREDDY INSTITUTE OF TECHNOLOGY DEPARTMENT OF CIVIL ENGINEERING







- 1. Design the principal tie member to carry a tensile force of 40 kN. The panel length is 3 m. Design the connection. Apply the slenderness check?
- 2. Design a tension member to carry a load of 280 kN. The two angles placed back to back with long legs out standing are desirable. The length of the member is 2.9m?
- 3. Explain Euler's formula for buckling of column. Define ideal column. Differentiate columns based on their buckling load for different end conditions?
- 4. Determine the tensile strength of roof truss diagonal of $150 \times 75 \times 10$ mm connected by its long lag to a gusset plate 8mm thick by 6mm welds. Adopt fy = 250 MPa?
- 5. Design a compression member of a single storey building which has to support a service load of 700 kN. The member has an effective length of 7.0 m with respect to z-axis and 5.0 m with respect to y-axis. Use steel of grade Fe410?
- 6. Determine the load carrying capacity of a compression memberISHB350@67.4kg/m, 3.5 m long and bounded by cover plate of size 300mmx20mm on each flange in a steel building which is restrained against direction and position on both the ends. Use steel of grade Fe410?
- 7. Design a tubular compression member 2.5 m long in a truss girder bridge to carry a load of 100 kN at service state. The member is subjected to reversal of stresses?
- 8.Determine the design loads on the purlins of an industrial building near visakhapatnam, given :Class of building: General with life of 50 years, Terrain category2.Maximum dimension=40m, width of building=15m, Height at eve's level=10m, Topography=□less than 30, permeability= medium, span of truss = 16 m, pitch=1in5, sheeting=A.C. sheets, spacing of purlins = 1.35m, spacing of truss=4m.
- 9.Determine the design forces in the members of a Fink type roof truss for an industrial building for the following data. Also find the reaction.

overall length of the building =48m

overall width of the building =16.5m

width (c/c of roof columns)=16m

rise of truss= 1/4 of span

self weight of purlins= 318N/m

height of columns=11m

roofing and side coverings = asbestos cement sheets (dead weight =171N/m2)

the building is located in industrial area Naini, Allahabad. both the ends of the truss are hinged. use steel of grade Fe 410.