Assignment 8

1. What is the maximum allowable deflection ratio of a beam in built-up columns?

2. The thickness of the lacing bar for double lacing should not be less than:
   a. No specific value mentioned.
   b. 1/4 in.
   c. 1/2 in.
   d. 3/8 in.

3. In a steelframe column, the angle of inclination of flanges to the axis of the member should be in the range of:
   a. 15° to 25°
   b. 30° to 45°
   c. 45° to 60°
   d. 60° to 75°

4. Beams are provided for a compression member that is designed to carry a tension close to 150 ksi.
   a. 3% axial stress in the member
   b. 4% axial stress in the member
   c. 5% axial stress in the member
   d. 6% axial stress in the member

5. The thickness of welded plates shall be:
   a. not less than 1/4" of distance between member connecting two members
   b. not less than 1/4" of distance between member connecting to both plates
   c. not less than 1/4" of distance between member connecting to two plates
   d. not less than 1/4" of distance between member connecting to both plates

6. In an outrigger, the two members (both) are used for the connection. In that case, the minimum width of the beam connecting should be:
   a. 6 in.
   b. 8 in.
   c. 10 in.
   d. 12 in.

7. A bent column. If the beam is having a deflection of 1.00 in. The column is restrained horizontally but not restrained vertically. How much will it deflect?
   a. 1.00 in.
   b. 0.50 in.
   c. 0.25 in.
   d. 0.125 in.

8. A distribution is not transferred through an outrigger of 180 kips. It is built up of two BMC-3 50 kips columns connected by being the bearing area until:
   a. 50 kips
   b. 75 kips
   c. 100 kips
   d. 125 kips

9. Two BMC-30s are placed back to back with a spacing of 300 mm and a single lacing system with an inclination of 30° to the line of the beam. If the gauge length is 40 cm, the stress value is:
   a. 360 MPa
   b. 510 MPa
   c. 620 MPa
   d. 840 MPa

10. Two BMC-30s are placed back to back with a spacing of 300 mm and a single lacing system with an inclination of being 30° to the line of the beam. If the gauge length is 40 cm and the grade of mild steel is 35S2, the stress value is:
    a. 360 MPa
    b. 510 MPa
    c. 620 MPa
    d. 840 MPa