Seismic Design in Steel
Quiz for Session 1: Seismic Design Concepts – Course Introduction – February 5, 2018
Due: February 26, 8:00 a.m. EST – Submit through the online form

1. In general a seismic displacement response spectrum
   a. Shows higher displacement for lower-period structures
   b. Shows lower displacement for lower-period structures

2. Inelasticity
   a. Lengthens the period
   b. Increases damping
   c. Both A and B
   d. Neither A nor B

3. Increasing post-yield stiffness
   a. Increases acceleration
   b. Decreases displacement
   c. Both A and B
   d. Neither A nor B

4. Utilizing a ductile material is beneficial in seismic design if
   a. The full strength of the member can be realized
   b. Connection failure can be prevented
   c. Ductility demands can be spread to multiple elements
   d. All of the above
   e. None of the above

5. Local buckling is prevented by
   a. Limiting the force in elements
   b. Using highly compact shapes
   c. Using a ductile material

6. Lateral bracing
   a. Prevents lateral torsional buckling
   b. Increases member ductility
   c. Reduces connection demand
   d. A and B
   e. None of the above

7. System ductility requires
   a. Ductile material
   b. Highly compact sections
   c. Strong connections
   d. Lateral stability of members
   e. Distributed yielding
   f. All of the above

8. Distributed yielding in a moment frame means
   a. Plastic hinges forming in beams and columns
   b. Plastic hinges forming in beams at multiple levels and at column bases

9. The higher the response modification factor, R
   a. The lower the structural system's damping
   b. The greater the structural system's capacity for inelastic drift
   c. Both A and B
   d. Neither A nor B

10. Which of the following systems is detailed and proportioned for a high level of structural drift?
    a. Intermediate Moment Frames
    b. Ordinary Concentrically Braced Frames
    c. Eccentrically Braced Frames