



1. As stated in the Commentary of the AISC *Seismic Provisions for Structural Steel Buildings*, how are structural steel systems expected to dissipate seismic input energy?
 - a. Through the cyclic elastic elongation and contraction of structural elements
 - b. Through controlled inelastic deformations of the structure
 - c. Both a and b
 - d. Neither a nor b
2. According to the speaker, where did about 90 percent of fractures occur in steel moment frames, during the 1994 Northridge earthquake?
 - a. At the top flange of beam-to-column connections
 - b. At the single-plate-to-column flange weld of beam-to-column connections
 - c. At the bottom flange of beam-to-column connections
 - d. At the top and bottom of the beam at the plastic moment location, about d away from the column face
3. What organization sponsored the development of recommendations for moment frame construction in seismic zones, based on studies of the 1994 Northridge earthquake?
 - a. American Institute of Steel Construction (AISC)
 - b. American Welding Society (AWS)
 - c. Federal Emergency Management Agency (FEMA)
 - d. United States Geological Survey (USGS)
4. True or False: The k -area is a region of the web that extends from the k dimension to a distance $1\text{-}1/2$ in. into the web beyond the k dimension.
 - a. True
 - b. False
5. Which of the following prequalified connections requires a weld access hole of a geometry specified in AWS D1.8?
 - a. Bolted Flange Plate Moment Connection (BFP)
 - b. Bolted Unstiffened Extended End-Plate Moment Connection (BUEEP)
 - c. Welded Unreinforced Flange-Welded Web Moment Connection (WUF-W)
 - d. All of the above



6. Where should demand critical welds be specified?
 - a. At any weld in a building containing a special moment frame
 - b. At any weld that is part of the seismic force resisting system
 - c. Where required in the prequalification standard
 - d. For the weld that is determined by the Engineer of Record as the most highly-stressed in a given connection

7. The Commentary of AWS D1.8 states that the scope of this standard is to ensure that welded joints, designed to undergo significant repetitive inelastic strains as a result of earthquakes, and welds connecting members, designed to resist such inelastic strains, have which of the following characteristics?
 - a. Strength
 - b. Notch toughness
 - c. Integrity
 - d. All of the above

8. Which of the following standards is referenced directly in the scope of AWS D1.8?
 - a. *AISC 360 Specification for Structural Steel Buildings*
 - b. *AISC 341 Seismic Provisions for Structural Steel Buildings*
 - c. *AISC 358 Prequalified Connections for Special and Intermediate Steel Moment Frames for Seismic Applications*
 - d. All of the above

9. Heat input is a function of which of the following?
 - a. Modulus of elasticity of the base material
 - b. Intensity of resistance
 - c. Travel speed
 - d. All of the above

10. True or False: Notch toughness is optimized by minimizing heat input.
 - a. True
 - b. False

