



1. If a welded connection does not have a direct load path, which of the following might result?
  - a. The stresses acting on the weld group may not be evenly distributed.
  - b. The connection may locally deform parts of the member that lie parallel to the direction of the force.
  - c. Both a and b
  - d. Neither a nor b
  
2. Why does the speaker recommend that welded cover plates in cyclically loaded beams terminate near areas of low beam moment?
  - a. To achieve sufficient weld length to increase the moment capacity of the beam
  - b. To achieve sufficient weld length to avoid a multi-pass weld
  - c. To avoid the need for transverse fillet welds at the end of the cover plate
  - d. To avoid a poor fatigue detail at the termination of the fillet welds in a region of high tensile stress
  
3. True or False: There are exceptions to the full-length backing requirement provided in AWS D1.1.
  - a. True
  - b. False
  
4. True or False: An overly-constrained welded connection may be vulnerable to cracking while the weld metal expands.
  - a. True
  - b. False
  
5. Given bending about the weak axis of the stem plate of a tee joint, how does the speaker recommend avoiding problematic bending of the weld?
  - a. Connect the stem of the tee with a fillet welds on each side of the stem plate
  - b. Connect the stem of the tee with a two-sided CJP groove weld
  - c. Provide a stiffener perpendicular to the stem plate
  - d. None of the above



6. Which of the following constitutes what the speaker describes as a “nothin’ weld”?
  - a. A weld that is ineffective in transferring forces because it connects an attachment to a perpendicular element of a member that deforms locally
  - b. A single-pass weld that is made in a flat position
  - c. A tack weld
  - d. None of the above
  
7. What example did the speaker give to specifically demonstrate how a welded connection can be detailed to be easy to fabricate?
  - a. A gusset plate that is detailed so that all welds may be made in the shop
  - b. A cover plate that is sized so that all welds may be made without rotating the member
  - c. A hanger plate that is welded to a round HSS in the longitudinal direction instead of the transverse direction
  - d. A butt splice connected with a single-sided CJP groove weld instead of a double-sided CJP groove weld
  
8. What does the speaker intend with the advice that “(a) correct and proper welded connection recognizes commercial realities”?
  - a. One should consider the tolerances associated with the structural shape production.
  - b. One should use steel materials readily available in the area of a project.
  - c. One should consider whether welded built-up shapes can be avoided, in favor of hot-rolled shapes.
  - d. None of the above
  
9. What architect wrote that “form ever follows function”?
  - a. Daniel Burnham
  - b. I.M. Pei
  - c. Louis Henry Sullivan
  - d. Frank Lloyd Wright
  
10. The speaker described a case study where corner welds were required for a 100-inch tall x 60-inch wide built-up box section? What lesson can be taken from this case study?
  - a. Box sections of such scale should always use CJP groove welds in the corners.
  - b. Detail choices that might have relatively little consequence to the final design can have major consequences for the fabricator with respect to safety.
  - c. Design engineers should not have input in the welding process that is chosen.
  - d. Even for box sections of this scale, fabrication work on the inside of the box cannot be safely performed.

