Topics on Industrial Building Design and Design of Non-Building Structures
Quiz for Session 1: Introduction and Code Provisions– June 16, 2020
Due: July 14, 8:00 a.m. EDT – Submit through the online form

1. AISC 360 Chapter N, Quality Control and Quality Assurance, is referenced by what code?
   a. ASCE 7-16
   b. IBC 2018
   c. OSHA 2016

2. You would reference ASME STS-1 to design:
   a. Mill buildings
   b. Industrial Tanks
   c. Pipe racks
   d. Steel Chimneys and Stacks

3. When determining mass for calculating seismic loads, where stored materials of a process facility are in bins and hoppers, the speaker suggests considering the weight of the stored materials as a floor live load and multiplying by 25%.
   a. True
   b. False

4. When determining the mass for calculating seismic loads, do you include the snow load?

   a. Yes
   b. No
   c. Yes, if the flat roof snow exceeds 20 psf , you would include 30% of the uniform design snow load.
   d. Yes, if the flat roof snow exceeds 30 psf , you would include 20% of the uniform design snow load.

5. For a nonbuilding structure similar to a building with an ordinary concentrically braced frame, you must always design the lateral force resisting system per the requirements of AISC 341-16.
   a. True
   b. False

6. When considering live loads of process piping, the speaker recommends assuming the pipes are:

   a. ¼ depth filled
   b. ½ depth filled
   c. ¾ depth filled
   d. Full depth filled

7. OSHA requires guardrails for walking/working surfaces that are how many feet above a lower level?
   a. 2.5’
   b. 3’
   c. 3.5’
   d. 4’

8. How do design requirements for guardrails for commercial occupancy differ from industrial occupancy?
   a. Commercial occupancy requires 42” high rails while industrial occupancy requires 36” high rails.
   b. Commercial occupancy requires a 2” diameter minimum for rail members, while industrial occupancy requires no minimum.
   c. Commercial occupancy requires the configuration of the railings be such that a 4” diameter maximum sphere can pass through any opening, while in an industrial occupancy it is relaxed to allow a 21” diameter maximum sphere to pass through any opening.

9. For all bridge cranes, you must include impact loads.
   a. True
   b. False

10. For a steel-framed, nonrectangular building configuration with a design temperature of 80 degrees F, braced frames, and is air conditioned as well as heated, FCC Tech Report No. 65 recommends an expansion joint spacing of:
    a. 170’
    b. 200’
    c. 230’
    d. 300’
    e. Not enough information given to determine joint spacing