



1. Per ASCE 7, the vertical impact is what percentage of the crane wheel load for powered monorail cranes?
  - a. 10%
  - b. 25%
  - c. 50%
  - d. 100%
  
2. True or False: Crane loads should be treated separately from other live loads.
  - a. True
  - b. False
  
3. Per the requirements of ASCE 7, which of the following statements is not true?
  - a. For all service classes of cranes, use 20% of the rated capacity and weight of the hoist and trolley to determine applied lateral load.
  - b. For all service classes of cranes, use 10% of the maximum wheel load to determine applied longitudinal load.
  - c. For all service classes of cranes, use 10% of the rated capacity and weight of the hoist and trolley to determine applied lateral load.
  - d. For all service classes of cranes, use 20% of the maximum wheel load to determine applied longitudinal load.
  - e. Both C and D are not true.
  - f. All of the above are not true.
  
4. Torsional forces due to the offset center of mass and centroid of the tractive forces are:
  - a. Called skewing forces.
  - b. Present when crane is accelerating or decelerating.
  - c. A separate load case to be considered.
  - d. All of the above



Topics on Industrial Building Design and Design of Non-Building Structures

Quiz for Session 4: Crane-Supporting Structures – July 14, 2020

Due: August 11, 8:00 a.m. EDT – Submit through the online form

5. A crane that performs 5 to 10 lifts per hour averaging below 50% of the rated capacity would be described as:
  - a. Standby or infrequent service (Class A).
  - b. Light service (Class B).
  - c. Moderate service (Class C).
  - d. Heavy service (Class D).
  
6. The speaker cautions against considering which of the following as a stepped column due to possible inadequate shear transfer?
  - a. Laced Column
  - b. Batten Column
  - c. Bracketed Column
  - d. Segmented Column
  
7. Which of the following is not typically included in a crane data sheet?
  - a. Trolley weight
  - b. Maximum beam runway length
  - c. Rated capacity
  - d. Bumper force
  - e. Wheel spacing
  
8. True or False: Skewing forces must be calculated and explicitly accounted for.
  - a. True
  - b. False
  
9. Fatigue considerations may be ignored:
  - a. For Class A crane service.
  - b. For Class B crane service under certain circumstances.
  - c. For both Class A and Class B.
  - d. For none of the above.
  
10. True or False: Since the mass of the crane itself is a moving load, it must be treated as a live load.
  - a. True
  - b. False

