

Steel Construction: From the Mill to Topping Out
Final Exam

Due: January 2, 2019, 8:00 a.m. EST – Submit through the online form



Note: *COSP* – AISC Code of Standard Practice

1. The erector is required by _____ to prepare for hurricane loads during erection:
 - a. AISC *COSP*
 - b. ASCE 7-10
 - c. ASCE 37-14
 - d. IBC 2015
 - e. None of the above

2. Tables of inspection requirements for structural steel construction can be found in:
 - a. IBC 2015
 - b. ASCE 7-10
 - c. AISC 360-16 Chapter N
 - d. AISC *COSP*
 - e. C and D

3. Constructability should be considered:
 - a. At the beginning of a project
 - b. At 90% Design Documents
 - c. During bidding
 - d. Throughout design, fabrication, and erection
 - e. When the building is complete

4. The following grade(s) is/are produced as “Quench and Self-Tempered”.
 - a. ASTM A36
 - b. ASTM A572
 - c. ASTM A913
 - d. ASTM A992
 - e. a, b and d
 - f. none of the above

5. At the ladle metallurgy furnace, the following gas is used to stir the heat in order to speed up the reactions and ensure adequate mixing and temperature homogenization throughout the ladle.
 - a. Argon
 - b. Hydrogen
 - c. Oxygen
 - d. None of the above



Copyright © 2018

American Institute of Steel Construction

Steel Construction: From the Mill to Topping Out
Final Exam

Due: January 2, 2019, 8:00 a.m. EST – Submit through the online form

6. Which of these elements will oxidize most readily in the electric arc furnace?
 - a. Copper
 - b. Vanadium
 - c. Chromium
 - d. Silicon

7. Where can you find the tolerances for camber material?
 - a. AWS D1.1
 - b. RCSC Bolt Specification
 - c. *AISC Specification*
 - d. *AISC COSP*

8. Where can you find tolerances for steel fabrication?
 - a. AWS D1.1 and *COSP*
 - b. RCSC Bolt Specification and *Manual*
 - c. RCSC Bolt Specification and AWS
 - d. *Specification* and *COSP*

9. Where can you find information on the size of shipping pieces?
 - a. Steel mill website
 - b. AISC website
 - c. Local steel fabricators
 - d. AWS website

10. True or False: According to the Code of Standard Practice, main member reinforcement at a connection location can be delegated to the fabricator's connection designer.
 - a. True
 - b. False

11. Which of the following allows for more efficient design of connections?
 - a. Repetitive sizes in framing members
 - b. $\frac{1}{2}$ Uniform Dead Load determination for shear loads
 - c. Repetitive geometry
 - d. a & c
 - e. All of the above

12. When using pretensioned bolts in slip critical connections, which hole types are allowed?
 - a. Oversize
 - b. Standard
 - c. Short Slots
 - d. Long Slots
 - e. All of the above



Steel Construction: From the Mill to Topping Out
Final Exam

Due: January 2, 2019, 8:00 a.m. EST – Submit through the online form

13. What is the major erection concern when connecting steel frames to cast in place concrete?
- Concrete strength vs. steel strength
 - Damage to concrete caused by welding to embed plates
 - Silica dust generation when bolting to concrete
 - The difference between concrete placement tolerances and steel erection tolerances
14. What is the major consideration in crane selection?
- Cost of purchase or rental
 - Lifting capacity
 - Length of crane boom
 - Shipping, assembly and required site preparation
 - All of the above
15. What is the major differentiating factor between erectors?
- Their pricing on a project
 - Their ability to select erection methods that maximize safety, minimize cost and meet schedule
 - Work well with the onsite construction team
 - Provide accurate and timely change order requests
16. The main characteristic(s) of an open framework structure that often lead to larger wind base shear during construction than in the final condition include:
- Higher design wind pressures
 - Higher drag coefficients
 - Increased solid area collecting wind
 - Both A and C
 - Both B and C
17. True or False: The EOR is not responsible for identifying special conditions for the erector to ensure the erection process produces a structure that meets the design intent.
- True
 - False



Steel Construction: From the Mill to Topping Out
Final Exam

Due: January 2, 2019, 8:00 a.m. EST – Submit through the online form

18. Stability bracing should remain in place until:
- The lateral force-resisting system and diaphragm elements supporting that portion of the structure are attached.
 - The erector wants to remove it
 - 50% of the structure has been erected
 - The building is completely erected
19. True or False: It is permissible to heat bend an ASTM F1554 Gr. 105 anchor rod.
- True
 - False
20. True or False: In making welded connections to structures, the AISC *Specification* permits existing rivets and SC high-strength bolts to be utilized to resist the loads present at the time of strengthening.
- True
 - False
21. Beams with 4 in. flange widths should be avoided at:
- Spandrel beams when using an adjustable edge form
 - Beams requiring bolted flange connections
 - Beams with double joist bearing
 - All of the above
22. Minimum requirements in Chapter N of the AISC *Specification* state that the fabricator or erector, as applicable, shall have a:
- Welder identification system
 - Bolter identification system
 - Both a welder and bolter identification system
 - None of the above
23. True or False: In an AISC certified fabrication shop, required non-destructive testing (NDT) of welds can be waived by the authority having jurisdiction.
- True
 - False
24. Pre-installation verification of bolts requires how many bolts per lot to be tested?
- 3
 - 5
 - 7
 - 10



Copyright © 2018

American Institute of Steel Construction