1. Which of the following must be considered when doing an analysis according to AISC 360-16?
   a. All deformations
   b. Second-order effects
   c. Geometric imperfections
   d. All of the above
   e. None of the above

2. A second-order analysis includes:
   a. equations of equilibrium written about the deformed geometry of the structure.
   b. only the effects of lateral load.
   c. only the effects of loads that vary with time.
   d. the determination of buckling load first.
   e. all of the above.

3. When doing a second-order analysis by double integration:
   a. there is only one correct direction for writing the moment equation.
   b. the constants of integration will depend on the definition of the variable x.
   c. it will always require a least 5 determinations of deflection to reach an acceptable solution.
   d. with careful selection of member properties, second-order effects can be completely eliminated.
   e. None of these are true.

4. Slope deflection is normally thought of as a method for linear analysis of a structure. With the use of stability functions,
   a. the influence of axial load on the flexural stiffness of the member can be included.
   b. the three dimensional behavior of a member can be included.
   c. the numerical coefficients in the member end moment equations can be varied as a function of the material properties.
   d. All of the above are true.
   e. None of these are true.
5. The approximate second-order analysis according to AISC 360-16 Appendix 8 requires:
   a. the use of moment distribution for the analysis.
   b. that structures be symmetrical.
   c. that all moments be amplified by a single amplification factor regardless of sway or non-sway.
   d. All of the above are true.
   e. None of these above are true.

6. When comparing classical methods to matrix methods, the slope deflection method is considered:
   a. a flexibility method.
   b. a stiffness method.
   c. unrelated to matrix methods.
   d. inadequate for analysis on any modern structure.
   e. None of the above

7. When comparing classical methods to matrix methods, the general method is considered:
   a. a flexibility method.
   b. a stiffness method.
   c. unrelated to matrix methods.
   d. inadequate for analysis on any modern structure.
   e. None of the above

8. The advantage of the stiffness method over the slope deflection method is:
   a. that the computer can be used for solution.
   b. all deformations can be included as required by AISC 360-16.
   c. non-prismatic members can be considered.
   d. All of the above
   e. None of the above
9. For the given beam-column bending about the x-axis with loading shown as addressed in this lesson, the second-order moment amplification is approximately:
   a. 1.00
   b. 1.04
   c. 1.08
   d. 1.16
   e. 1.20

10. If the moment in Problem 9 is doubled, the second-order moment amplification is approximately:
   a. 1.00
   b. 1.04
   c. 1.08
   d. 1.16
   e. 1.20