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SEISMIC PROVISIONS FOR STRUCTURAL STEEL BUILDINGS

1. **Nominal strength divided by the safety factor is**
 - a) torsional strength
 - b) allowable strength
 - c) expanded strength
 - d) brace strength
2. **Structural design drawings and specifications shall show**
 - a) configuration of the connections
 - b) connection material specifications and sizes
 - c) location of demand critical welds
 - d) All of the above
3. **Erection drawings shall show**
 - a) field connection material specifications and sizes
 - b) the manufacturer of pretensioned bolts
 - c) location of seismic zones
 - d) All of the above
4. **All bolts shall be**
 - a) pretensioned bolts
 - b) high strength bolts
 - c) pretensioned high strength bolts
 - d) None of the above
5. **The available strength of partial-joint penetration groove welded joints**
 - a) shall be at least equal to 100% of the required strength
 - b) shall be at least equal to 150% of the required strength
 - c) shall be at least equal to 200% of the required strength
 - d) shall be at least equal to 250% of the required strength
6. **Tension in each H-pile shall be transferred to the pile cap by mechanical**
 - a) means such as shear keys
 - b) means such as reinforcing bars
 - c) means such as studs welded to the embedded portion of the pile
 - d) Any of the above

7. **The region at each end of the beam subject to inelastic straining**
 - a) shall be treated as a protected zone
 - b) shall be treated as a seismic zone
 - c) shall be treated as a normal zone
 - d) shall be treated as a elastic zone
8. **Beams in V-type and inverted V-type bracing shall be**
 - a) parallel to the columns
 - b) horizontal to the columns
 - c) vertical to the columns
 - d) continuous between the columns
9. **Full-depth web stiffeners shall be provided on both sides of the link web**
 - a) at the vertical brace ends of the link
 - b) at the diagonal brace ends of the link
 - c) at the horizontal brace ends of the link
 - d) Any of the above
10. **The steel core shall be designed to resist**
 - a) 25% of the entire axial force in the brace
 - b) 50% of the entire axial force in the brace
 - c) 75% of the entire axial force in the brace
 - d) the entire axial force in the brace
11. **Fabrication documents include**
 - a) inspection procedures
 - b) nonconformance procedure
 - c) material control procedure
 - d) All of the above
12. **Inspection of welding shall be completed**
 - a) by immersion in water
 - b) by electronic methods
 - c) visually
 - d) All of the above
13. **Extensions of a weld tabs need not exceed the joint by**
 - a) one inch
 - b) two inches
 - c) three inches
 - d) four inches
14. **A round or rectangular structural steel section filled with concrete is**
 - a) a filled composite column
 - b) an encased composite column
 - c) a filled composite column
 - d) a fully composite column

15. **The maximum spacing of transverse bars at the top and bottom shall be**
- a) the least of one-half the least dimension of the section
 - b) the least of 8 longitudinal bar diameters
 - c) the least of 24 tie bar diameters
 - d) All of the above
16. **Selection of structural steels used explicitly for seismic applications**
- a) is based on their inelastic properties
 - b) is based on their weldability
 - c) both a and b
 - d) None of the above
17. **H-piles can be subjected to tension due to**
- a) special moment
 - b) overturning moment
 - c) both a and b
 - d) neither a nor b
18. **Special moment frames are expected to experience significant**
- a) inelastic deformation during large seismic events
 - b) elastic deformation during large seismic events
 - c) interstory deformation during large seismic events
 - d) All of the above
19. **When unbraced connections occur, the potential for out-of-plane**
- a) buckling at the connection should be maximized
 - b) buckling at the connection should be eliminated
 - c) buckling at the connection should be minimized
 - d) buckling at the connection should be estimated
20. **Buckling-restrained braced frames are a special class of**
- a) parallel braced frames
 - b) concentrically braced frames
 - c) eccentrically braced frames
 - d) None of the above

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