

**GEOGRAPHIC INFORMATION SYSTEMS
GEOGRAPHIC INFORMATION CENTER
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***** EXAMINATION *****

GROUNDING AND BONDING ACCORDING TO THE 2005 NATIONAL ELECTRICAL CODE

1. **An effective ground-fault current path is:**
 - a) intentionally constructed
 - b) permanent
 - c) low-impedance
 - d) All of the above
2. **Electrical systems that are grounded shall be connected to:**
 - a) a connector of at least 120 volts
 - b) a connector of at least 240 volts
 - c) the earth
 - d) None of the above
3. **The grounding of electrical systems shall be installed to prevent**
 - a) objectionable current over the grounding conductors 6 hours per day
 - b) objectionable current over the grounding conductors 10 hours per day
 - c) objectionable current over the grounding conductors 16 hours per day
 - d) objectionable current over the grounding conductors 24 hours per day
4. **An alteration to stop objectionable current may be:**
 - a) change the locations of the grounding connections
 - b) take other suitable remedial and approved action
 - c) discontinue one or more but not all of the grounding connections
 - d) Any of the above
5. **Currents that introduce noise in electronic equipment**
 - a) shall be considered objectionable currents
 - b) shall not be considered objectionable currents
 - c) may not be considered objectionable currents
 - d) None of the above
6. **Grounded conductors and bonding jumpers shall be connected by:**
 - a) exothermic welding
 - b) listed pressure connectors
 - c) listed clamps
 - d) Any of the above

7. **Sheet metal screw shall not be used to**
 - a) connect grounding conductors
 - b) connect connection devices to enclosures
 - c) Both a and b
 - d) Neither a nor b
8. **Grounding equipment that depends solely on solder may include**
 - a) connected devices
 - b) fittings
 - c) Both a and b
 - d) Neither a nor b
9. **Nonconductive coatings on equipment to be grounded may include**
 - a) paint
 - b) lacquer
 - c) enamel
 - d) None of the above
10. **Alternating-current systems of less than 50 volts shall be grounded if**
 - a) the transformer supply system exceeds 150 volts to ground
 - b) the transformer supply system exceeds 180 volts to ground
 - c) the transformer supply system exceeds 210 volts to ground
 - d) the transformer supply system exceeds 240 volts to ground
11. **Alternating-current systems of less than 50 volts shall be grounded if**
 - a) installed as overhead conductors outside of a building
 - b) installed inside an attic
 - c) installed inside a basement
 - d) None of the above
12. **An AC system of 50 volts to 1000 volts not required to be grounded**
 - a) may be an industrial furnace for melting
 - b) may be an industrial furnace for refining
 - c) may be an industrial furnace for tempering
 - d) Any of the above
13. **Grounding for an alternating-current premise, single-phase,**
 - a) 2-wire system, uses a neutral conductor
 - b) 2-wire system, uses one conductor
 - c) 2-wire system, uses a common conductor
 - d) Any of the above
14. **Grounding for an alternating-current premise, single-phase,**
 - a) 3-wire system, uses a neutral conductor
 - b) 3-wire system, uses one conductor
 - c) 3-wire system, uses a common conductor
 - d) Any of the above

15. **Each tap conductor shall connect the grounded conductor of the separately**
 - a) derived system to the common grounding electrode conductor
 - b) derived system to the neutral grounding electrode conductor
 - c) derived system to the one phase electrode conductor
 - d) derived system to the two phase electrode conductor
16. **The system neutral conductor shall**
 - a) not be connected to the ground
 - b) be connected to the ground by any means
 - c) not be connected to the ground except through the grounding impedance
 - d) None of the above
17. **Pipe electrodes used for grounding shall not be less than**
 - a) 2 feet in length
 - b) 4 feet in length
 - c) 6 feet in length
 - d) 8 feet in length
18. **A plate electrode used for grounding shall expose not less than**
 - a) 2 square feet of surface to exterior soil
 - b) 4 square feet of surface to exterior soil
 - c) 6 square feet of surface to exterior soil
 - d) 8 square feet of surface to exterior soil
19. **Plate electrodes of nonferrous metal used for grounding shall be**
 - a) at least 0.03 inch thick
 - b) at least 0.06 inch thick
 - c) at least 0.09 inch thick
 - d) at least 0.12 inch thick
20. **Plate electrodes used for grounding shall be installed not less than**
 - a) 10 inches below the surface of the earth
 - b) 20 inches below the surface of the earth
 - c) 30 inches below the surface of the earth
 - d) 40 inches below the surface of the earth

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<p>*** ANSWER SHEET *** U256</p> <p>GROUNDING AND BONDING ACCORDING TO THE 2005 NATIONAL ELECTRICAL CODE</p>	<p><u>STATE BOARD</u> <u>COURSE NO.</u> <u>VALUE</u></p>
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