



Electrical Power Distribution Systems Final Exam

1. With regards to *transformer losses*, in general, a heavily loaded transformer has lower losses, and therefore has _____, than when it is lightly loaded.
 - a. lower life cycle cost
 - b. longer life expectancy
 - c. higher life cycle cost
 - d. shorter life expectancy

2. Considering *line regulation*, the voltage drop for primary lines shall not exceed:
 - a. 5 percent
 - b. 3 percent
 - c. 10 percent
 - d. 2 percent

3. With respect to *cable types*, lead-sheathed cable is generally used for *submarine* (underwater) installations and is usually:
 - a. carbon-composite
 - b. clad in poly-vinyl chloride
 - c. annealed-magnesium
 - d. armored

4. In determining the *strength requirements* and the adequate physical and structural requirements for *overhead* system support *poles*, the designer should refer to _____ and ANSI C2.
 - a. ASTM-E2018
 - b. Fink and Beaty, Standard Handbook for Electrical Engineers
 - c. National Electrical Institute Wiring and Distribution Reference Volume 2
 - d. United States Steel Structural Design Guide, 2005 Edition

5. Considering *hardware* for *overhead systems*, in locations sensitive to electromagnetic interference, primary lines should be installed:
 - a. overhead
 - b. in parallel
 - c. underground
 - d. inside lead pipes

6. *Capacitors* raise voltage levels by reducing the reactive line losses associated with _____ between the capacitor installation and the power supply.
- resistance
 - electro-magnetic interference
 - reactive current flow
 - current distortion
7. Where an *underwater* cable crossing is subjected to flow or tidal currents, _____ are usually required to prevent excessive drifting or shifting of the cable along the bottom.
- trenches
 - conduits
 - stand-offs
 - anchors
8. Regarding *underground* cable insulation *advantages*, _____ are thermosetting, solid dielectric compounds with excellent electrical insulation properties, good chemical resistance and physical strength characteristics, and both remain flexible at low temperatures.
- both XLP and EPR
 - PVC and XLP
 - both butyl rubber and EPR
 - cambric and silicone-rubber
9. A _____ *substation* is a unit substation in which the low-voltage section is above 1000 volts.
- load center secondary
 - secondary unit rated
 - articulated unit
 - primary unit rated
10. With regards to *transformers*, primary unit *substations* require less land space, are visually less objectionable, and because of the integrated transformer to secondary connection, _____ than separate substation transformers and secondary protective devices.
- are less reliable.
 - are more reliable
 - are more complicated
 - are more difficult to install