

Trainee Name: _____

Social Security Number: _____ Date: _____

- _____ 1. A transformer that uses a single winding for both its primary and secondary is known as a(n) _____.
 a. potential transformer
 b. constant-current transformer
 c. autotransformer
 d. control transformer
- _____ 2. A residential doorbell circuit is likely to incorporate a(n) _____ transformer.
 a. instrument
 b. step-down
 c. current
 d. buck-and-boost
- _____ 3. Polarity is best described as the _____.
 a. instantaneous direction of current at a specific moment
 b. temperature of transformer coils
 c. current-carrying capacity of transformers
 d. internal resistance of transformers
- _____ 4. All of the following are components of a transformer *except* _____.
 a. a primary coil
 b. a secondary coil
 c. an iron core
 d. metering equipment
- _____ 5. A device that is used to step up generated voltage to transmission voltage is called a _____ transformer.
 a. power
 b. current
 c. potential
 d. grounding
- _____ 6. A residence with 120V and 240V loads is likely to be served by a(n) _____.
 a. single-phase transformer with two secondaries
 b. autotransformer
 c. three-phase transformer
 d. buck-and-boost transformer
- _____ 7. Autotransformers are especially practical if the difference between the primary and secondary voltages is _____.
 a. as great as possible
 b. relatively large
 c. within 15% of factory specifications
 d. relatively small
- _____ 8. Which of the following best describes a transformer connection with one end of each coil connected at a common point?
 a. Closed delta
 b. Y
 c. Delta-X
 d. Open delta

- _____ 9. The constant secondary current in a constant-current transformer is typically between _____.
- 0.5 and 1A
 - 1A and 2A
 - 4A and 7.5A
 - 10A and 20A
- _____ 10. Which of the following deals with grounding separately derived AC systems?
- NEC Section 110.4**
 - NEC Section 250.30**
 - NEC Section 504.4**
 - NEC Chapter 9**
- _____ 11. Of the following, a _____ transformer is the most appropriate type of transformer to use for series street lighting.
- current
 - potential
 - constant-current
 - buck-and-boost
- _____ 12. A crest factor well above 1.414 indicates the presence of _____.
- single-phase voltage harmonics
 - single-phase current harmonics
 - a faulty meter
 - three-phase voltage harmonics
- _____ 13. All of the following statements are true with regard to potential transformers *except* _____.
- they are single-phase transformers
 - the primary of a potential transformer is always connected across the main power lines
 - the secondary circuit is grounded
 - they are never used in three-phase circuits
- _____ 14. Which of the following systems is the most likely to be affected significantly by harmonics?
- Three-phase, four-wire systems with nonlinear loads connected to 120V circuits
 - Single-phase, three-wire systems with some loads connected to 120V circuits
 - Three-phase, three-wire systems with no 120V loads
 - Three-phase, four-wire systems with no 120V loads
- _____ 15. Reduced sizing of neutral conductors is prohibited by _____.
- NEC Article 220**
 - NEC Article 230**
 - NEC Article 240**
 - NEC Article 250**