

TRUE/FALSE

1. Nikola Tesla discovered the “Tesla Effect.”

ANS: F REF: Introduction

2. In Edison’s time, the power that we used for our homes was AC.

ANS: F REF: Introduction

3. You can say that a given voltage is positive with respect to the negative point.

ANS: T REF: Waveforms

4. One hertz is equal to one complete cycle per second.

ANS: T REF: Waveforms

5. A bridge rectifier uses diodes to provide full wave rectification.

ANS: T REF: Rectifier

MULTIPLE CHOICE

1. The basic operation of a(n) ____ is to pass current in one direction only.

a. inverter c. converter
b. rectifier d. transformer

ANS: B REF: Rectifier

2. In a bridge rectifier, the ____ of the output is the same regardless of the polarity of the input.

a. quality c. delay
b. efficiency d. polarity

ANS: D REF: Bridge Rectifier

3. You should never discharge the capacitor by ____.

a. shorting the terminals c. heating it
b. disconnecting it without turning it off d. turning it off

ANS: A REF: Inverter

4. A motor generator set is a DC motor driving a(n) ____.

a. rectifier c. bridge rectifier
b. AC alternator d. inverter

ANS: B REF: Inverter

5. In 1957, the solid-state inverter became practicable with the introduction of the ____.
- a. thyristor
 - b. rectifier
 - c. bridge rectifier
 - d. diode

ANS: A REF: Inverter

6. Inverters are also known as ____.
- a. thyristors
 - b. diodes
 - c. oscillators
 - d. rectifiers

ANS: C REF: Inverter

7. Square waves are full of ____.
- a. phase distortion
 - b. amplitude distortion
 - c. frequency distortion
 - d. harmonic distortion

ANS: D REF: Inverter

8. The Modified Square Wave is also called the ____.
- a. Quasi Cosine Wave
 - b. Cosine Wave
 - c. Modified Sine Wave
 - d. Tangent Wave

ANS: C REF: Inverter

9. The USB 2.0 specification has a data transfer rate up to ____.
- a. 60 Mbit/s
 - b. 120 Mbit/s
 - c. 240 Mbit/s
 - d. 480 Mbit/s

ANS: D REF: Alternative Energy Monitoring Systems

10. Ethernet is a computer networking technology for ____.
- a. Wide Area Networks (WANs)
 - b. Metropolitan Area Networks (MANs)
 - c. Local Area Networks (LANs)
 - d. Wireless Local Area Networks (WLANs)

ANS: C REF: Alternative Energy Monitoring Systems

SHORT ANSWER

1. What is frequency measured in?

ANS:

Frequency is measured in hertz.

REF: Waveforms

2. What is the bridge rectifier also called?

ANS:

The bridge rectifier is also called the Graetz circuit after Leo Graetz who invented it in 1880.

REF: Bridge Rectifier

3. What is Bluetooth?

ANS:

Bluetooth is an open wireless protocol for exchanging data over short distances.

REF: Alternative Energy Monitoring Systems

4. What does TCP stand for?

ANS:

TCP stands for Transmission Control Protocol.

REF: Alternative Energy Monitoring Systems

5. How do power line communication systems operate?

ANS:

All power line communication systems operate by impressing a modulated signal on the wiring system that is used to supply the power.

REF: Alternative Energy Monitoring Systems