



Course: Electrical Fundamentals

Module: 3A

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Questions:

Electron Theory

Q 1 An electron is a particle which: -

- a) consists of two or more atoms chemically combined.
- b) orbits the nucleus of an atom.
- c) is contained in the nucleus of an atom.

Q 2 The nucleus of an Atom contains: -

- a) protons and electrons.
- b) protons, electrons and usually neutrons.
- c) protons and usually neutrons.

Q 3 A molecule is: -

- a) part of an Atomic nucleus.
- b) the smallest particle of a compound which can exist independently.
- c) the smallest particle of matter.

Static Electricity and Conduction

Q 4 Protons have: -

- a) A positive charge.
- b) No charge.
- c) A negative charge.

Q 5 Two Protons in close proximity will: -

- a) Repel each other.
- b) Attract each other.
- c) Have no effect on each other.

Q 6 Which of the following describes Coulombs Law for electrical charges ?

- a) Like charges repel, unlike charges attract.

- b) Like charges attract, unlike charges repel.
- c) Like charges repel, unlike charges repel.

Electrical Terminology

Q 7 Frequency (Hz) is the number of Hertz per: -

- a) Revolution.
- b) Minute.
- c) Second.

Q 8 One ampere is equal to: -

- a) 1 coulomb - second .
- b) 1 coulomb per second .
- c) 6.26×10 to the power of 18 electrons .

Q 9 Which of the following describes the true direction of current flow in an electrical circuit ?

- a) Conventional Current flow.
- b) Electron flow.
- c) Either of the above.

Generation of Electricity

Q 10 The magnitude of the voltage produced by a Thermocouple depends on: -

- a) Temperature of Hot Junction only.
- b) Temperature of Cold Junction only.
- c) Difference in temperature between Hot and Cold Junction.

Q 11 The method most commonly used in producing large amounts of electrical power is through:
-

- a) Electrochemistry.
- b) Electromagnetism.
- c) Photoelectricity.

Q 12 Voltage produced through friction is called: -

- a) Static Electricity.
- b) Electromagnetism.
- c) Electrochemistry.

Q 13 Which of the following materials is used in light sensors ?

- a) Silver Oxide.
- b) Gold.

- b) Gold.
- c) Gallium Arsenide.

DC Sources of Electricity

Q 14 Ampere Hour is a function of: -

- a) amps X volts.
- b) amps X minutes.
- c) amps X hours.

Q 15 During the discharge cycle of a Nickel Cadmium cell, the electrolyte level: -

- a) rises.
- b) does not change.
- c) falls.

Q 16 The electrolyte in a Nickel Cadmium cell is a solution of: -

- a) potassium hydroxide.
- b) chromic acid.
- c) nickel hydroxide.

Q 17 A Nickel Cadmium battery consists of 20, 1.2 volt cells. What will the nominal battery output be?

- a) 20 V.
- b) 22 V.
- c) 24 V.

AC Theory

Q 18 Frequency (Hz) is the number of cycles per: -

- a) revolution.
- b) minute.
- c) second.

Q 19 The shape of the output waveform of an A.C. generator is known as a: -

- a) cosine wave.
- b) frequency wave.
- c) sine wave.

Q 20 The phase difference between each phase voltage in a 3 phase system is: -

- a) 90 degrees.
- b) 90 volts.

- b) 90 volts.
- c) 120 degrees.

SAMPLE