

- Q.26 What is difference between step up and step down transformer?
- Q.27 Define fuse and explain its classification.
- Q.28 Write short note on common safety measures and earthing.
- Q.29 Write difference between low and high voltage distribution system.
- Q.30 Describe power and energy.
- Q.31 What is difference between single phase and three phase motor.
- Q.32 Write distinction light and fan circuits.
- Q.33 Write any five application of servo motor.
- Q.34 Write short note on Zener diode.
- Q.35 Write five differences between AC and DC.

SECTION-D

Note: Long answer type questions. Attempt any two questions out of three questions. (2x10=20)

- Q.36 What is transformer explain its construction and working principle.
- Q.37 What is transistor explain characteristics and uses of PNP transistor.
- Q.38 Write short note
- MCB.
 - ELCBs.

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**1st Sem / Mechanical Engineering
Subject:- Basics of Electrical and
Electronics Engineering**

Time : 3Hrs.

M.M. : 100

SECTION-A

Note: Multiple choice questions. All questions are compulsory (10x1=10)

- Q.1 How many cycles will an AC signal make in 2 seconds if its frequency is 100Hz?
- 50
 - 100
 - 150
 - 200
- Q.2 Which of the following element of electrical engineering cannot be analyzed using Ohm's law?
- Capacitors
 - inductors
 - Transistors
 - Resistance
- Q.3 What is frequency of D.C.?
- Zero
 - 50Hz
 - 60Hz
 - None of these
- Q.4 In which device is the principle of statically induced emf used?
- Transformer
 - Motor
 - Generator
 - Battery

Q.5 What is rectification?

- a) Process of conversion of ac into dc
- b) Process of conversion of low ac into high ac
- c) Process of conversion of dc into ac
- d) Process of conversion of low dc into high dc

Q.6 What is a transistor made up of?

- a) Chip b) Insulator
- c) Semiconductor d) Metal

Q.7 What is responsible for the current to flow?

- a) Protons
- b) Electrons
- c) Nucleus
- d) Protons and Electrons

Q.8 What is the formula of electric power?

- a) IR
- b) VR
- c) VI
- d) V/I

Q.9 What is the semiconductor diode used as?

- a) Oscillator
- b) Amplifier
- c) Rectifier
- d) Modulator

Q.10 Which of the following is not an electronic device?

- a) A mobile
- b) A computer
- c) A magnifying glass
- d) A keyboard

SECTION-B

Note: Objective type questions. All questions are compulsory. $(10 \times 1 = 10)$

Q.11 Write any two home appliances which work on DC.

Q.12 What is purpose of secondary winding of transformer?

Q.13 What is frequency?

Q.14 Write full form of E.M.F.

Q.15 Write the full form of AC and DC.

Q.16 Draw symbol of NPN transistor.

Q.17 Define energy.

Q.18 Write unit of power.

Q.19 Transformer is a _____ device.

Q.20 Write the full form of ELCB.

SECTION-C

Note: Short answer type questions. Attempt any twelve questions out of fifteen questions. $(12 \times 5 = 60)$

Q.21 What is semiconductor and write its application.

Q.22 Write any five precautions against electric shock.

Q.23 How we change direction of rotation of a 3 phase induction motor.

Q.24 Write note on E.M.F. production.

Q.25 Write five differences between single phase and three phase supply.