

- 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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MSIL-120136/030136

Roll No. ....

**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 the 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. (10x1=10)

- Q.11 Write any two home appliances which are 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. (12x5=60)

- Q.21 What is semiconductor and write its application.
- Q.22 Write any five precautions against electric shock.
- Q.23 How we changing 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.