

- Q.27 Explain any five advantages of three phase supply over single phase supply.
- Q.28 State difference between fuse and MCB.
- Q.29 What is the difference between circuit and sub circuit?
- Q.30 Describe the working of servo motor.
- Q.31 Write five difference between direct online starter and star delta starter
- Q.32 Write various application of three phase motor.
- Q.33 What is the purpose of earthing.
- Q.34 Define transistor and its types.
- Q.35 Explain Zener diodes and their application.

#### **SECTION-D**

- Note:** Long answer type questions. Attempt any two questions out of three questions. (2x10=20)
- Q.36 Explain principle and working of a transformer with neat diagram.
- Q.37 Explain the characteristics and applications of a Thyristor.
- Q.38 What do you mean by earthing? Draw and explain pipe earthing.

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MSIL-120136/030136

**1st Sem / Mechanical Engineering ( MSIL )**  
**Subject:- Basics of Electrical & Electronics Engineering**

Time : 3Hrs. M.M. : 100

#### **SECTION-A**

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

- Q.1 The current which does not change it's direction is known as  
 a) Alternating current b) Direct current  
 c) Both a and b d) Magnetic flux
- Q.2 Frequency of AC current is  
 a) 60 Hz b) 55 Hz  
 c) 50 Hz d) 100 Hz
- Q.3 The instrument used for the measurement of current is  
 a) Wattmeter b) Ammeter  
 c) Voltmeter d) Barometer
- Q.4 A transformer is rated for it's output in  
 a) KWH b) Watt  
 c) Volts d) KVA
- Q.5 A wire which carries the load current is called  
 a) Neutral wire b) Phase wire  
 c) Earth wire d) None

Q.6 How many watt are there in 1 HP.

- a) 500
- b) 736
- c) 746
- d) 550

Q.7 A semi conductor with an impurity added to it is known as

- a) Extrinsic Semi Conductor
- b) Intrinsic Semi Conductor
- c) Semi conductor
- d) None of these

Q.8 Single phase supply has voltage

- a) 440 V
- b) 260 V
- c) 100 V
- d) 220 V

Q.9 SCR stands for?

- a) Silicon Controlled Rectifier
- b) Source Controlled Rectifier
- c) Source current Rectifier
- d) Silicon Current Rectifier

Q.10 A material having 3 electrons in its valence orbit is known as

- a) P-type Impurity
- b) N-type Impurity
- c) Extrinsic semi conductor
- d) None

## SECTION-B

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

Q.11 What is direct current?

Q.12 Define electric current and its unit.

Q.13 Define power and its unit.

Q.14 What is wattmeter.

Q.15 What is secondary winding?

Q.16 What is function of a transformer?

Q.17 What is neutral wire?

Q.18 What is diode?

Q.19 Write full form of ELCB.

Q.20 Write full form of SCR

## SECTION-C

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

Q.21 Differentiate between AC voltage and DC voltage.

Q.22 Explain five advantages of electrical energy over the other form of energy.

Q.23 Explain the difference between resistance and specific resistance.

Q.24 Describe voltage and current and write the name of instrument used for measuring voltage and current.

Q.25 What is phase wire, neutral wire and Earth wire?

Q.26 Define phase voltage and line voltage.