Q.26 Explain pipe earthing with the help of neat diagram.

Q.27 Differentiate between PNP and NPN transistors.

Q.28 Explain any five advantages of three phase supply over single phase supply.

Q.29 List any five steps to be taken against the protection of electric shock.

Q.30 Explain star-delta starter used for starting of three phase induction motor along with neat diagram.

Q.31 Differentiate between high voltage and low voltage distribution system.

Q.32 Why earthing is required in electrical wiring?

Q.33 Explain P type and N type semiconductor.

Q.34 Write any five applications of three phase induction motor.

Q.35 What is a fuse? Discuss five advantages of fuse.

SECTION-D

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

Q.36 Explain working of Zener diode with its applications.

Q.37 Explain construction and working of Transformer with the help of neat diagram .

Q.38 Explain construction and working of single phase electric motor.

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3th Sem / Mech. Engg.

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 frequency of DC power supply is

a) Zero b) 25 Hz

c) 50 Hz d) None

Q.2 A Voltmeter is an electrical instrument used to measure

a) Voltage b) Current

c) Power d) Energy

Q.3 1 horse power is equal to_____ watt.

a) 500 b) 600

c) 746 d) 700

Q.4 Transformer core are laminated in order to

a) Reduce hysteresis loss

b) Reduce hysteresis & eddy current loss

c) Minimize eddy current loss

d) Copper loss

Q.5 The Starting winding of a single phase motor is placed in

a) Rotor b) Stator

c) Armature d) Field

Q.6 Minority charge carriers of p type semiconductor is_____

a) Holes b) Electrons

c) Both d) None

Q.7 _____diode is used as voltage regulator.

a) Ideal diode b) Tunnel diode

c) Photo diode d) Zener diode

Q.8 On which of the following effects of electric current a fuse operates?

a) Photoelectric effect b) Electrostatic effect

c) Heating effect d) Magnetic effect

Q.9 SCR stands for ?

a) Source-controlled rectifier

b) silicon-controlled rectifier

c) source-current rectifier

d) silicon-current rectifier

Q.10 A good servo motor should provide high torque at all _____

a) Loads b) Frequencies

c) Speeds d) Voltages

SECTION-B

Note: Objective type questions. All questions are compulsory. (10x1=10)

Q.11 ELCB stands for_____.

Q.12 A switch is connected to the neutral wire.(T/F)

Q.13 The emitter of a transistor is_____doped. (heavily / lightly)

Q.14 What is the function of limit switch?

Q.15 Tell the S.I unit of electrical energy.

Q.16 What is the color of neutral wire in electric circuit?

Q.17 An electric motor converts mechanical energy into electrical energy.(T/F)

Q.18 Draw symbol of Zener diode.

Q.19 Tell the S.I unit of current.

Q.20 What is the full form of emf?

SECTION-C

Note: Short answer type questions. Attempt any twelve questions out of fifteen questions. (12x5=60)

Q.21 Differentiate between AC voltage and DC voltage ?

Q.22 Explain the operation of MCB.

Q.23 Explain the advantages of electrical energy over nuclear energy.

Q.24 Write a short note on servo motor.

Q.25 Explain any five applications of thyristors.