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3rd Sem./ AGRI ENGG.

Subject : Basics of Electrical and Electronics Engineering

Time : 3 Hrs.

M.M. : 100

SECTION-A

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

Q.1 Potential difference between phase and neutral in single phase system is. (CO-1)

- a) 150 volt
- b) 320 volt
- c) 440 volt
- d) 220 volt

Q.2 What is the unit of Voltage? (CO-1)

- a) Volt
- b) Amp.
- c) Ohm
- d) Watt

Q.3 Full form of E.M.F. is: (CO-2)

- a) Electromotive force
- b) Equal motive force
- c) Equal motive field
- d) Equal motion field

Q.4 Breather is provided in a transformer to (CO-3)

- a) Absorb moisture of air during breathing
- b) Provide cold air in the transformer
- c) To filter the transformer oil
- d) None of the above

Q.5 Which of the following loss in a transformer is zero even at full load. (CO-3)

- a) Core loss

- b) Friction loss
- c) Eddy current loss
- d) Hysteresis Loss

Q.6 Identify the color of phase wire, neutral wire and earth wire in domestic wiring system. (CO-4)

- a) Red, Black, Yellow
- b) Red, Yellow, Blue
- c) Red, Yellow, White
- d) Red, Black, Green

Q.7 What type of material is used for winding/coil in induction motor. (CO-5)

- a) Bronze
- b) Copper
- c) Silicon Steel
- d) Cast Iron

Q.8 Sub circuit are directly connected with (CO-6)

- a) Energy Meter
- b) DPIC Switch
- c) Distribution Board
- d) All of the above

Q.9 A fuse is provided in an electric circuit for (CO-6)

- a) Safeguarding the insulation against heavy current.
- b) Reducing the current flowing in the circuit
- c) Reducing the power Consumption
- d) All of the above

Q.10 The middle section of a PNP transistor is known as (CO-7)

- a) Emitter
- b) Collector
- c) Base
- d) All of the above

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SECTION-B

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

- Q.11 Write a most common source of DC supply. (CO-1)
Q.12 In an electric circuit the voltage is measured by which instrument. (CO-1)
Q.13 The time period of an alternating quantity is the time required to complete one cycle. (True/False). (CO-2)
Q.14 On which side of transformer the load is connected (Primary side or Secondary side). (CO-3)
Q.15 What is the value of line voltage between two phase? (CO-4)
Q.16 Which motor is used in ceiling fan? (CO-5)
Q.17 Write full form of PVC. (CO-6)
Q.18 Is earthing of electrical appliances is very important? (CO-6)
Q.19 The valence electron of a conductor is also called as free electrons (True/False). (CO-7)
Q.20 How many junctions are there in a transistor? (CO-7)

SECTION-C

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

- Q.21 What are the advantages of electrical energy over other form of energy? (CO-1)
Q.22 What is resistance? On what factor the resistance of conductor depends? (CO-1)
Q.23 What are the advantages of improved power factor? (CO-2)

- Q.24 What are the causes of low power factor? (CO-2)
Q.25 Explain various losses in transformer. (CO-3)
Q.26 List the part of a transformer and explain any two. (CO-3)
Q.27 What is high voltage distribution system? (CO-4)
Q.28 Explain the working principle of 3 phase induction motor. (CO-5)
Q.29 Write any five differences of single phase and three phase Motors. (CO-5)
Q.30 What are differences between circuit and sub circuit. (CO-4)
Q.31 What are the common safety measures to avoid the risk of electric shock? (CO-6)
Q.32 What is the purpose of providing fuses on phase wires in an electric circuit? (CO-6)
Q.33 Explain the ELCB in detail. (CO-6)
Q.34 What is intrinsic and extrinsic semiconductor? (CO-7)
Q.35 What is the valence band and conduction band? (CO-7)

SECTION-D

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

- Q.36 Draw and explain star and delta connection of three phase electrical system. (CO-4)
Q.37 Briefly explain various methods of cooling of transformer. (CO-3)
Q.38 Explain forward and reverse biased VI characteristics of junction diode. (CO-7)

(Note: Course outcome/CO is for office use only)