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Roll No.

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3rd Sem / Branch : Agri, auto Chem, P&P, Civil, Mech, Plastic Prod, T&D,CNC,CAD/CAM, Found. & Forge , Metallurgy, Print Making Tech, Mech (Ad. Manu. Tech), Mech Engg. (Fabrication tech.), Mech Engg (Production)

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 What is the frequency of AC? (CO1)

- a) 10Hz
- b) 50Hz
- c) 0Hz
- d) None of these

Q.2 What is the unit of electric current ? (CO1)

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

Q.3 RMS stands for. (CO2)

- a) Root mean square
- b) Root mean sum
- c) Root maximum sum
- d) Root minimum sum

Q.4 Lamination of transformer core is made by. (CO3)

- a) Cast iron
- b) Silicon steel
- c) Aluminum
- d) Cast steel

Q.5 Which of the following loss in a transformer is zero even at full load (CO3)

- a) Core Loss
- b) Friction loss
- c) Eddy current loss
- d) hysteresis loss

Q.6 Identify the colour of three phase wires. (CO4)

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

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Q.7 Stator core of induction motor is usually made of.

(CO5)

- a) Mild steel
- b) aluminium
- c) laminated silicon steel
- d) Cast iron

Q.8 Insulation on a current carrying conductor is provided to prevent . (CO6)

- a) Current leakage
- b) Electric Shock
- c) Both (a) and (b)
- d) None of these

Q.9 A fuse is. (CO6)

- a) Always connect in series with the circuit
- b) Always connect in parallel with the circuit
- c) Normally connect in parallel
- d) None of these

Q.10 Name the three leads of a common transistor.(CO7)

- a) Collector, bias, Emitter
- b) Base Collector Diode
- c) Collector, base emitter
- d) None of the above

SECTION-B

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

Q.11 Name the wave shape off AC. (CO1)

Q.12 In an electric circuit the current is measured by which instrument. (CO2)

Q.13 One complete set which consists of all positive and all negative value of an Alternating quantity is called a cycle (True/False) (CO1)

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- Q.14 Is transformer has a rotating part? (CO3)
Q.15 Write full form of ACSR conductor. (CO4)
Q.16 How many types of rotors are used in induction motor? (CO5)
Q.17 What is the full form of DPIC switch which is used in domestic installation? (CO4)
Q.18 The purpose of earthing is to protect human body from electric Shok (True/False) (CO6)
Q.19 A bipolar junction transistor has three semiconductors sections what are they? (CO7)
Q.20 An electron can move to another atom's orbit only while in the conduction band.(True/False) (CO7)

SECTION-C

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

- Q.21 Describe any five applications of electricity. (CO1)
Q.22 Define electrical current. Which instrument is used to measure it ? (CO1)
Q.23 How we can improve the low power factor by the used of capacitor ? (CO2)
Q.24 Define self-induced and mutually induced e.m.f. (CO3)
Q.25 State the working principle of transformer. (CO3)
Q.26 What method are used for cooling of transformer? Explain anyone. (CO3)
Q.27 What are phases wire neutral wire and earth wire? (CO4)

- Q.28 Write any five differences between single phase and Three phase supply system? (CO4)
Q.29 Explain why single phase induction motor is not self-starting? (CO5)
Q.30 Explain how we can reverse the direction of rotation of 3-phase induction motor. (CO5)
Q.31 Write down how many types of wiring system and define any one of these. (CO4)
Q.32 Explain earthing and its purpose. (CO6)
Q.33 Explain H.R.C. fuse. (CO6)
Q.34 What is intrinsic and extrinsic semiconductor? (CO7)
Q.35 What is working of zener diode? (CO7)

SECTION-D

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

- Q.36 What is three phase system and draw its phasor diagram ? write five advantages of three phase system over single phase system. (CO1)
Q.37 Describe the working construction of a single phase transformer. (CO3)
Q.38 Draw a key diagram of 3 phase transmission system and explain its component in detail. (CO4)