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Roll No. .....

3rd Year / Advance Diploma in Tool and Die Making

Subject : Basics of Electrical & Electronics Engineering

Time : 3 Hrs. M.M. : 60

SECTION-A

Note: Multiple choice questions. All questions are compulsory (6x1=6)

Q.1 Voltage is measured by which instrument?

a) Ammeter b) Voltameter

c) Watt meter d) Energy meter

Q.2 Unit of frequency is_____.

a) Tesla b) Ohm

c) Hertz d) Weber

Q.3 Rotor of Induction motor is made up of

a) Cast iron b) Aluminum

c) High Carbon Steel d) Silicon Steel

Q.4 The flux involved in the EMF equation of a transformer has

a) Maximum value b) Average value

c) Total value d) RMS value

SECTION-D

Note: Long answer type questions. Attempt any two questions out of three questions. (2x8=16)

Q.23 Describe the construction and working principle of Three-phase Induction Motor.

Q.24 Explain the function of emitter, base and collector in the operation of junction transistors.

Q.25 Explain the working of Single-phase Transformer with the help of a neat diagram.

Q.5 If a D.C. motor is connected across the A.C. supply it will

a) Run at normal Speed

b) Not Run

c) Get Burned

d) Run at lower speed

Q.6 The input is a _____ wire supply in single phase rectifier

a) Three b) Two

c) Five d) Four

SECTION-B

Note: Objective/ Completion type questions. All questions are compulsory. (6x1=6)

Q.7 Define Doping.

Q.8 The maximum (positive or negative) value of an alternating quantity is known as its_____.

Q.9 Full form of RMS value is_____.

Q.10 Germanium is an insulating material. (True/False)

Q.11 _____ is a device which converts A.C. into D.C.

Q.12 Define Electricity.

SECTION-C

Note: Short answer type questions. Attempt any eight questions out of ten questions. (8x4=32)

Q.13 Explain Kirchoff's current law.

Q.14 Write the mathematical expression for equivalent resistance for combination of cells

a) In series b) In parallel

Q.15 Mention applications of Alternator. Also mention its two safety measures.

Q.16 State Lenz's Law.

Q.17 Write a short note on half wave rectifier.

Q.18 Explain AND Gate with proper diagram.

Q.19 Explain the working of Servometer.

Q.20 What do you understand by self-induced EMF.

Q.21 Write a short note on Uni-Junctional Transistor (UJT).

Q.22 Explain Drift Velocity. What is the relation between drift velocity and Electric current?