

- Q.25 Classify various types of furnaces.
- Q.26 Explain the working principle of stepper motor.
- Q.27 Describe the construction and working of half wave rectifier.
- Q.28 Explain the construction of BJT transistor.
- Q.29 The number of primary and secondary windings is 110 and 240 respectively. The primary voltage is given by 300v, Give what determines the secondary voltage?
- Q.30 Draw and explain a typical domestic wiring circuit.
- Q.31 Describe the working of FET.
- Q.32 Explain plate earthing method.
- Q.33 What are Universal Gates?
- Q.34 How a servo motor is different from normal motors? Explain briefly.
- Q.35 Explain the working of UJT.

#### SECTION-D

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

- Q.36 Compare the series and shunt motor.
- Q.37 What are filter circuits? Explain the working of any one filter circuit with its diagram.
- Q.38 Write short note on :
- Effect of AC voltage on pure inductance
  - 3 phase Squirrel cage method.

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### 3rd Year / Advance Diploma in Tool and Die Making Subject:- Electrical and Electronics Engineering

Time : 3Hrs.

M.M. : 100

#### SECTION-A

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

- Q.1 \_\_\_\_\_ circuits are designed to pass some frequencies known as noise and reject others.
- Thyristor
  - Transistor
  - Diode
  - Filter
- Q.2 In resistive circuits, the CURRENT is in \_\_\_\_\_ phase of the VOLTAGE
- Same
  - Leading
  - Lagging
  - None of the above
- Q.3 The value of voltage between two phases is \_\_\_\_\_ volts.
- 220 v
  - 440 v
  - 110 v
  - 420 v
- Q.4 Multimeter is used for \_\_\_\_\_.
- Current
  - Voltage
  - Resistance
  - All of the above

- Q.5 The approximate efficiency of a transformer is
- a) 50%                                  b) 80%
- c) 95%                                  d) 65%
- Q.6 \_\_\_\_\_ motor is self starting type?
- a) Single phase                      b) 3 phase
- c) Both (a) and (b)              d) None of the above
- Q.7 The following is a semiconductor material
- a) Aluminum                      b) Silicon
- c) Boron                              d) Helium
- Q.8 Name the three legs of an amplifier.
- a) BJT, EFT, UJT
- b) Base, emitter, collector
- c) Collector, transmitter, emitter
- d) None of the above
- Q.9 \_\_\_\_\_ shows all the possible truth values returned by a gate
- a) Truth & false                  b) 0 & 1
- c) High & Low                      d) Truth Table
- Q.10 A \_\_\_\_\_ circuit uses only one diode for the transformation of AC
- a) Half wave rectifier      b) Full wave rectifier
- c) Transistor                      d) Thyristor

## SECTION-B

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

- Q.11 Name any two uses of single phase circuits
- Q.12 SI units of current is \_\_\_\_\_ and voltage is \_\_\_\_\_
- Q.13 Three phases are shown by \_\_\_\_\_, \_\_\_\_\_ and \_\_\_\_\_ color.
- Q.14 Transformer works on the principle of \_\_\_\_\_
- Q.15 Best first aid for electric shock is \_\_\_\_\_.
- Q.16 Necessity of earthing is to \_\_\_\_\_
- Q.17 Name 3 configuration of amplifiers \_\_\_\_\_
- Q.18 Logic gates are the circuits which allow \_\_\_\_\_
- Q.19 An electrical device which converts an alternating current into a direct one by allowing a current to flow through it in one direction only is \_\_\_\_\_
- Q.20 What is the symbol of a thyristor?

## SECTION-C

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

- Q.21 Write short note on method of cooling of transformer.
- Q.22 Explain the construction of DC shunt motor.
- Q.23 Enlist the Indian Electricity rules for testing of Electrical Installation.
- Q.24 Explain the working of 3 phase induction motor.