Total No. of Printed Pages—4

21/VC/EL

2021

ELECTRONICS

(Vocational Course)

Full Marks : 30

Time : 1 hour

The figures in the margin indicate full marks for the questions

1. Choose the correct answer : 1×8=8

(a) Water heater works on the principle of

(i) Joule's law

(ii) Faraday's law

(b) The winding which is connected to supply is called _____ winding.

(i) secondary

(ii) primary

(c) Mica sheet is a _____ conductor of electricity.

(i) good

(ii) bad

(d) Which type of battery is used in emergency light?

(i) Alkaline battery

(ii) Lead-acid battery

(e) The SI unit of electric current is

(i) coulomb

(ii) ampere

(f) The transformer is a _____ device.

(i) dynamic

(ii) static

(g) Which type of switchs is required for staircase wiring?

(i) One lamp controlled by two switches

(ii) Two lamps controlled by two switches

(h) Fuse is always connected in

(i) live wire

(ii) neutral

2. Answer the following in *1* word or *1* sentence each (any *four*) : 1×4=4

(a) Define staircase wiring.

(b) What is the function of secondary winding in transformer?

(c) Write the full form of MCB.

(d) What are the advantages of choke in tube light?

(e) Who discovered photovoltaic effect?

(f) Draw a simple wiring diagram of one lamp controlled by one switch.

3. Answer the following questions in *3* or *4* sentences each (any *three*) : 2×3=6

(a) What is earthing? State the types of earthing.

(b) Differentiate between electrical choke and electronic choke.

(c) State the working principle of electric iron.

(d) What are the applications of solar power supply?

(e) What are the different types of emergency lights? Explain.

4. Answer the following questions in 60–80 words each (any *three*) : 4×3=12

(a) State the working principle of single-phase motor.

(b) State the principle of photovoltaic effect. Draw the block diagram of solar power supply.

(c) Explain the working of a half-wave rectifier.

(d) What is emergency light? Explain bridge rectifier.

(e) List out the precautions while handling emergency light.

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