

Q.1. Attempt any four:

04

- a) The unit of electric current is _____.
i) Ampere ii) Ohm iii) Volt
- b) 1Kilovolt = _____.
i) 100V ii) 1000V iii) 10,000V
- c) The unit of electrical charge is _____.
i) Coulomb ii) Joule iii) Watt
- d) _____ is used to control temperature of automatic electric iron.
i) Resistor ii) Regulator iii) Thermostat
- e) The switches are made of _____.
i) bakelite ii) lead iii) asbestos
- f) In staircase wiring _____ switch is used.
i) one way ii) two way iii) bell push

Q. 2. Attempt any three:

06

- a) Draw the conventional symbols for the following:
i) Neutral link, ii) Two way switch, iii) Socket outlet 3-pin, 5A with switch, iv) Buzzer.
- b) Draw a neat and labelled circuit diagram of stair-case wiring.
- c) Define: i) Electric Current, ii) Electromotive force (e.m.f.). State their units.
- d) Define: i) Power, ii) Energy in an electrical circuit. State the units in which they are measured.

Q. 3. Attempt any three:

06

- a) Draw a neat and labelled circuit diagram of 3-point Godown wiring.
- b) State Ohm's law.
- c) What are the effects of an electric current?
- d) Describe the construction of VIR wire with a neat sketch.

Q. 4. Attempt any two:

06

- a) Draw a neat and labelled circuit diagram of one point series-parallel testing board.
- b) On what factors does the resistance of a substance depend? Explain.
- c) Two lamps of 500W each, rated at 250V are connected i) in series, ii) in parallel across 250V supply. Calculate the total current in each case.

Q. 5. Attempt any two:

06

- a) Distinguish between series and parallel circuit.
- b) Explain the parts of an electric iron with a neat diagrams.
- c) Describe the construction of CTS wire with a neat sketch.

Q. 6 Attempt any two:

12

- a) The electrical installation in a house is used in the following manner:
i) lamps 100W each, 20 nos., 6h a day,
ii) fan 60W each, 6 nos., 5h a day,
iii) electric cooker 1.5kW, 2 nos., 4h a day,
iv) electric geyser 1kW, 2 nos., 3h a day.
Calculate the total cost of energy for 30 days at the rate of 40 paise per unit.
- b) Describe the construction and application of CTS and lead sheathed wires with a neat sketch.
- c) What are the different types of switches? Draw their conventional symbols and give the specifications of any six.