Chapter 8 – Electricity

A. Objective Questions

1. Write true or false for each statement:

(a) A fuse wire has a high melting point.

Solution: False.

(b) Flow of protons constitutes electric current.

Solution: False.

(c) Silver is an insulator of electricity.

Solution: False.

(d) S.L. unit and commercial unit of electrical energy are same.

Solution: False.

(e) Overloading of electric current in circuits can lead to short circuiting.

Solution: True.

(f) Our body can pass electricity through it.

Solution: True.

(g) All metals are insulators of electricity.

Solution: False.

(h) The earth wire protects us from an electric shock.

Solution: True.

(i) A switch should not be touched with wet hands.

Solution: True.

(j) AH electrical appliances in a household circuit work at the same voltage.

Solution: True.

(k) In a cable, the green wire is the live wire.

Solution: False.

(l) A fuse is connected to the live wire.

Solution: True.

(m) A switch is connected to the neutral wire.

Solution: False.

Question 2

Fill in the blanks

(a) The unit in which we pay the cost of electricity is **kWh.**

(b) The electrical energy consumed in a house is measured by **kWh meter.**

(c) In a household electrical circuit, the appliances are connected in **parallel** with the mains.

(d) A switch is connected to the **live** wire.

(e) The red colour insulated wire in a cable is the **live** wire.

(f) One kilowatt hour is equal to **3.6×10^6** joule.

(g) A fuse wire should have low **melting point**.

Question 3

Match the following

Column A	Column B
(a) Electric power	(i) volt
(b) kWh	(ii) joule
(c) Electric current	(iii) volt × ampere
(d) Electric energy	(iv) watt
(e) watt	(v) ampere
(f) Potential difference	(vi) electrical energy

Solution:

Column A	Column B
(a) Electric power	(iv) watt
(b) kWh	(vi) electrical energy
(c) Electric current	(v) ampere
(d) Electric energy	(ii) joule
(e) watt	(iii) volt × ampere
(f) Potential difference	(i) volt

Question 4

Select the correct alternative

(a) All wires used in electric circuits should be covered with

1. colouring material

2. conducting material

3. an insulating material

4. none of the above

Answer: 3. an insulating material

(b) Electric work done per unit time is

1. electrical energy

2. electric current

3. electric voltage

4. electrical power

Answer: 4. electrical power

(c) One kilowatt is equal to

1. 100 watt

2. 1000 watt

3. 10 watt

4. none of these

Answer: 2. 1000 watt

(d) Fuse wire is an alloy of

1. tin-lead

2. copper-lead

3. tin-copper

4. lead-silver

Answer: 1. tin-lead

(e) A fuse wire should have

1. a low melting point

2. high melting point

3. very high melting point

4. none of the above

Answer: 1. a low melting point

(f) When switch of an electric appliance is put off, it disconnects

1. the live wire

2. the neutral wire

3. the earth wire

4. the live and the neutral wire

Answer: 1. the live wire

(g) The purpose of an electric meter in a house is

1. to give the cost of electricity directly

2. to give the consumption of electrical energy

3. to safeguard the circuit from short circuiting

4. to put on or off the mains.

Answer: 2. to give the consumption of electrical energy

(h) If out of the two lighted bulbs in a room, one bulb suddenly fuses, then

1. other bulb will glow more

2. other bulb will glow more

3. other bulb will also fuse

4. other bulb will remain lighted unaffected.

Answer: 4. other bulb will remain lighted unaffected.