EXERCISE # 1

A. VERY SHORT ANSWER TYPE QUESTIONS

Q.1 What do you need to apply across a bulb to cause a current to flow through it?

Q.2 Why does a bulb get warmer than the wires that connect it to a battery?

Q.3 A magnetic needle gets deflected when brought near a current-carrying conductor. What does this show?

Q.4 What happens when you place an iron nail in a current-carrying coil?

Q.5 Why do we use a soft iron core in an electromagnet?

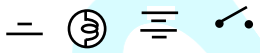
Q.6 Name four devices that use the heating effect of electric current.

Q.7 Mention four applications of electromagnets.

B. SHORT ANSWER TYPE QUESTIONS

Q.8 What is a circuit diagram? Draw the circuit diagram of a torch which works on three cells.

Q.9 Identify the following symbols. Also mark the positive and negative terminals in the symbol for the cell.



Q.10 How is the heat produced by an electric current related to resistance and the magnitude of the current?

Q.11. Why is a long and thin tungsten filament used in a bulb?

Q.12 Mention two problems associated with the heating effect of electric current.

Q.13 What is an electromagnet? Mention two properties of an electromagnet.

C. LONG ANSWER TYPE QUESTIONS

Q.14 What is electrical resistance? On what does the resistance of a piece of material depend? How does resistance affect current?

Q.15 What is a fuse? How does it work?

Q.16 Explain with the help of a diagram the construction and working of an electric bell.

D. FILL IN THE BLANKS

Q.17 The greater the ..... across a device, the greater is the current through it.

Q.18 The connections between components are represented by ..... in a circuit diagram.

Q.19 A long wire has ..... resistance than a short wire.

Q.20 An ..... is a condition in which a wire carries a current that is more than what is safe.

Q.21 A closely wound length of wire is called a .....

EXERCISE # 2

Single Correct Answer type Questions

Q.1 A moving charge produces -
(A) neither electric field nor magnetic field
(B) electrostatic field only
(C) magnetic field only
(D) both magnetic and electrostatic field

Q.2 Strength of an electromagnet increases by -
(A) increasing the number of turns of the coil
(B) increasing the current flowing through the coil
(C) using soft iron core for the coil
(D) all of the above

Q.3 An electric current produces -
(A) Magnetic effect
(B) Chemical effect
(C) Heating effect
(D) All of the above

Q.4 The process by which chemical change takes place in a substance when electric current is passed through it is called -
(A) electrolysis
(B) electroplating
(C) electrodes
(D) thermionic conduction

Q.5 An electrolyte is -
(A) a light electric cell
(B) a liquid that conducts electricity
(C) a metal
(D) non of the above

Q.6 Cathode is -
(A) positively charged electrode
(B) negatively charged electrode
(C) a positively charged ion formed in the electrolyte
(D) a negatively charged ion formed in the electrolyte.

Q.7 Electric bell works on the principle of -
(A) chemical effect of current
(B) magnetic effect of current
(C) heating effect of current
(D) all of the above

Q.8 Which is the false statement ?
(A) Fuse wire has low resistance and melting point
(B) Heater wire has high specific resistance and melting point
(C) In these day M.C.B. is used in place of fuse wire
(D) Current does not flow in close circuit.

Q.9 An electric bell when ringing-
(A) carries no electric current
(B) carries continuous current
(C) carries intermittent current
(D) has a permanent magnet to make it work

Q.10 Which is the best conductor ?
(A) carbon (B) Copper
(C) Iron (D) Aluminium

Q.11 The magnitude of a current flowing through a device depends
(A) only on the voltage across it
(B) only on its resistance
(C) on its resistance and the voltage across it
(D) none of these

Q.12 Nichrome is used for making
(A) the filaments of bulbs
(B) fuse wires
(C) heater elements
(D) coils for electromagnets

Q.13 To make a battery of 9 volts. how many 1.5 V cells are needed?
(A) 6 (B) 5
(C) 4 (D) 3

ANSWER KEY

EXERCISE-2

Ques	1	2	3	4	5	6	7	8	9	10	11	12	13
Ans	D	D	D	A	B	B	B	D	C	B	C	A	A