

SYLLABUS : LIGHT, MAGNET AND ELECTRICITY**GENERAL INSTRUCTIONS : Draw Diagrams with Pencils.**

- All questions are compulsory. **Maximum Marks are 60.**

SECTION – A : (0.5 × 20 = 10)**1. FILL IN THE BLANKS:**

- Like poles of two magnets _____ (attract/repel) each other.
- A horseshoe magnet should be stored with a piece of _____ (plastic/iron) across its poles.
- A _____ (credit card/magnetic compass) is a device used to find directions.
- Sun is a/an _____ (natural/artificial) source of light.
- Shadows are formed when light rays are obstructed by _____ (transparent/opaque) objects.
- Reflection from a _____ (smooth/rough) surface is called diffused reflection.
- A _____ (source/conductor) is a device that produces electric current.
- Electric current flows only if the circuit is _____ (closed/open).
- The part of an electric bulb that glows is called the _____ (filament/terminal).
- Primary cells _____ (can/cannot) be recharged once they are used up.

2. TRUE / FALSE

- The magnetic compass always points in the East-West direction.
- Magnets compass can be made to have only one pole.
- A magnetic compass can be used to find directions.
- Shadows are formed only during the day.
- A shadow is formed when an opaque object blocks the light falling on it.
- An inverted image is formed in a pinhole camera.
- We cannot turn on or off an electric bulb using a switch.
- An insulator is material through which an electric current cannot flow.
- All metals are bat conductors of electricity.
- When the switch is in the OFF position the electric circuit is open.

SECTION – B : (1 × 5 = 5)**3. Write two examples of each.**

- Conductors
- Sources of electric current
- Transparent objects
- Magnetic materials
- Devices that use magnets

SECTION – C : (2 × 10 = 20)

- What would happen to the poles of a bar magnet if the bar was broken into two pieces?
- Define: (a) Compass (b) Temporary magnet
- What is a magnet? Of what material are magnets usually made?
- What are 'rays' and 'beams'? Represent them diagrammatically.
- Give two examples each of natural and artificial sources of light.
- List three characteristics of a shadow.
- List the conditions needed for a shadow to form.
- Define: (a) Electric Switch (b) Electric Circuit

12. What does each of the following do in an electric circuit?
(a) cell (b) bulb (c) wires (d) switch
13. The handles of tools like screwdrivers and pliers used by electricians for repair work usually have plastic or rubber covers on them. Can you explain why?

SECTION – D : (3 × 5 = 15)

14. List the three basic conditions required for an electric current to flow.
15. What is meant by : (a) a complete circuit, and (b) an open circuit?
Draw sketches of the two type of circuits to explain your answer.
16. Differentiate between the image and shadow of an object.
17. Explain the ways by which a magnet can lose its magnetic properties.
18. Why does a freely suspended magnet align itself in the geographical North-South direction?

SECTION – E : (5 × 2 = 10)

19. (a) Explain how an iron needle can be magnetized.
(b) Give any two uses of magnets.
20. (a) Explain lateral inversion.
(b) Differentiate between the image and shadow of an object.
(c) What do you understand by conductors and insulators? Give two examples of each.