



I. Multiple Choice Questions

1. Electricity is the movement of
a) molecules b) electrons c) atoms d) neutrons
2. Which one of the following is based on the heating effect of current?
a) Geyser b) Hairdryer c) Immersion rod d) All of these
3. The coil of wire contained in an electric heater is known as
a) component b) element c) electromagnet d) spring
4. The amount of heat produced in a wire depends on
a) material b) length c) thickness d) all of these.
5. Part of the plant that take part in sexual reproduction is
(a) seed (b) fruit (c) flower (d) branch
6. Vegetative propagation is a type of
(a) asexual reproduction (b) sexual reproduction (c) binary fission (d) none of these
7. Which of the following contains male gamete?
(a) Filament (b) Ovule (c) Pollen (d) Anther
8. A bus travels 54 km in 90 min. The speed of the bus is
(a) 0.6 m/s (b) 10 m/s (c) 5.4 m/s (d) 3.6 m/s

9. When the speed of an object moving along a straight line keeps changing its motion is called
a) Periodic b) Uniform c) Non-Uniform d) All the above
10. The wire which melts and breaks the circuit when large current is allowed to flow through it is called:
a) A fuse wire b) Element c) Connecting wire d) Filament
11. Which of the following appliances is based on the magnetic effect of current:
a) Electric kettle b) Electric bell c) Electric iron d) Electric oven
12. In an electric bell, which of these gets attracted to the electromagnet:
a) The hammer b) The soft iron strip c) The screw d) None of these
13. After fertilization, ovule develops into
(a) fruit (b) stem (c) root (d) seed
14. Winged seeds is a characteristic of seeds dispersed by
(a) water (b) wind (c) animals (d) insect
15. Asexual reproduction takes place through fragmentation in
(a) potato (b) ferns (c) yeast (d) Spirogyra

II. Fill in the blanks

16. The combination of two or more cells is called a_____.
17. The working of an electric bulb, electric iron and the fuse is based on the _____effect of electric current.
18. The wire used for electric fuse should be of _____melting point.
19. _____is called weakest link in an electric wiring.
20. _____discovered the magnetic effect of electric current.
21. A current carrying coil of an insulated wire wrapped around a piece of iron is called _____
22. If the insulation on the wires has come off due to wear and tear, this may cause_
23. Image formed by a_____mirror is always virtual and smaller in size.
24. An image which can be obtained on a screen is called a_____image.
25. Light travels along a_____line.

III. Assertion & Reasoning

Directions: In the following questions, a statement of assertion is followed by a statement of reason.

Mark the correct choice as:

- (a) If both Assertion and Reason are true and Reason is the correct explanation of Assertion.**
- (b) If both Assertion and Reason are true but Reason is not the correct explanation of Assertion.**
- (c) If Assertion is true but Reason is false.**
- (d) If both Assertion and Reason are false.**

26. Assertion: Flowers are the structures related to sexual reproduction in flowering plants.
Reason: Various embryological processes of plants occur in a flower.

27. Assertion: MCB is an automatically operated electrical circuit when excessive current flows through it.

Reason: MCB cannot be reset manually or automatically

28. Assertion: Cameras, telescopes & binoculars use concave lenses in combination with convex to improve the quality of the images they form

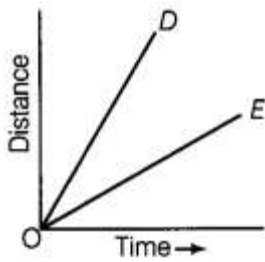
Reason: The lens in our eye is a convex lens that helps to focus light on the retina.

IV. Answer the Following questions

- 29. Name some devices which use the heating effect of electric current.
- 30. Which material is used as the heating element in most appliances? Why?
- 31. What will happen when a magnetic compass is brought near a current-carrying wire?
- 32. What is the advantage of CFL over ordinary bulbs?
- 33. List three characteristics of wires that affect the amount of heat produced.
- 34. An electrician is carrying out some repairs in your house. He wants to replace a fuse by a piece of wire. Would you agree? Give reasons for your response.
- 35. What is an electromagnet? List some applications of electromagnets.
- 36. Explain why, any metal wire or metal strip cannot be used in place of fuse wire.
- 37. How is an electric fuse different from an MCB? Which one is better? Give reason
- 38. List three factors that affect the strength of the magnetic field of a solenoid.
- 39. How will you prove that electromagnets are temporary magnets?
- 40. Explain the working of a simple Electric bell with the help of a diagram.

41. A shopkeeper wanted to fix a mirror which would give a maximum view of his shop. Which type of mirror should he use?
42. Is the image formed by a plane mirror always upright?
43. Can you get a real image at any distance of the object from the convex mirror?
44. Mention the type of image formed on a cinema screen.
45. Can we use convex mirrors as shaving mirrors? Justify your answer.
46. If one wall of a room is covered by a plane mirror, the room appears bigger. Give reason.
47. How can you experimentally locate the principal focus of a concave mirror?
48. Briefly state the characteristics of image formed by a plane mirror.
49. The side mirror of a scooter got broken. The mechanic replaced it with a plane mirror. Mention any inconvenience that the driver of the scooter will face while using it.
50. How can we get an image the same size as the object in a concave mirror?
51. What is a lateral inversion?
52. Assume, a person is standing in front of a plane mirror. The distance between the mirror and his image is 6 m. If the person moves 2 m towards the plane mirror, what would be the distance between the person and his image?
53. A shopkeeper wanted to fix a mirror which will give a maximum view of his shop. Which type of mirror should he use?
54. Is the image formed by a plane mirror is always upright?
55. A spaceship travels 36000 km in one hour. Express its speed in km/s.
56. Can you get a real image at any distance of the object from the convex mirror?
57. Mention the type of image formed on a cinema screen.
58. Can we use convex mirrors as shaving mirrors? Justify your answer.
59. If one wall of a room is covered by a plane mirror, the room appears bigger. Give reasons.
60. How can you experimentally locate the principal focus of a concave mirror?
61. Briefly state the characteristics of an image formed by a plane mirror.
62. The side mirror of a scooter got broken. The mechanic replaced it with a plane mirror. Mention any inconvenience that the driver of the scooter will face while using it.

63. The following figure shows the distance-time graph for the motion of two objects D and E. Which one of them is moving slower?



64. What is vegetative propagation? Describe vegetative propagation through different parts of the plant.

65. Explain reproduction through spore formation

66. Write how the following seeds are dispersed.

(a) Seeds with wings

(b) Small and light seeds.

(c) Seeds with spines/hooks
