**Chapter 12**

**Light and Shadows**

1. When light falls on wood, plastic sheet, state what happens ?
2. State the three things required for the shadow formation.
3. Fill in the blanks
4. \_\_\_\_\_\_\_\_\_\_ of an opaque object always black irrespective of its colour.
5. Sun or stars that emit light of their own are called \_\_\_\_\_\_\_\_\_\_.
6. Objects that allow light to pass through them partially are known as \_\_\_\_\_\_\_ objects.
7. A \_\_\_\_\_\_\_\_\_\_\_\_ occurs on a new moon day when the sun, the moon and the earth are in straight line.
8. The \_\_\_\_\_\_\_\_\_\_\_ camera is simple application of property of light moving along a straight line.
9. When light is reflected from a shining surfaces like plane mirror or shining metal sheet it is \_\_\_\_\_\_\_\_\_ reflection.
10. In case of plane mirror the image is \_\_\_\_\_\_\_\_\_\_\_ inverted with respect to the object.
11. \_\_\_\_\_\_\_\_\_ is form of energy that helps us to see objects.
12. \_\_\_\_\_\_\_\_\_\_ eclipse happens when earth comes between the sun and the moon.
13. State whether given statements are true/ false
14. The image of an object in a plane mirror is same size as that of the object.
15. When light is reflected by irregular surface than you get diffused reflection.
16. LED, electric bulbs, tube lights are man-made or artificial source of light.
17. In case of lunar eclipse the earth comes in between the sun and the moon
18. Translucent objects allow partial passage of lights.
19. Define the following
20. Opaque object
21. Translucent object
22. Irregular reflection
23. Shadow
24. Lateral inversion
25. Give reasons for the following.
26. Irrespective of the colour of object the shadow is always black.
27. When light falls on rough surface there is no glare in any particular direction.
28. We should not look at sun directly with naked eyes during a solar eclipse.
29. Solar eclipse cannot be seen on new moon day.
30. Shadow is formed when we place opaque object in path of light.
31. Give examples of the following
32. 2 transparent objects
33. 2 translucent materials
34. 2 natural source of light
35. 2 man-made source of light
36. Shadow can be misleading at times, justify.
37. State an activity that shows that light cannot bend around obstacles.
38. Write down the main characteristic of shadow.
39. Multiple choice questions
40. Which one is not a man-made source of light
41. LED b) Star c) tube light d) bulb
42. Which of the given statement is not correct about a image formed by plane mirror?
43. Identifies the object and gives its complete information
44. Image can be obtained on the screen c) Image shows lateral inversion d)Image has fixed size irrespective of its distance from the mirror.
45. The pin-hole camera is simple application of \_\_\_\_\_\_\_ property of light.
46. Light moves in straight line b) light is not able to bend when it hits in obstacle
47. It forms shadows d) none
48. When light falls on a polished surface we get glare or a blinding effect in our eyes because of
49. Regular reflection b) Irregular reflection c) refraction d) none
50. How is solar eclipse different from a lunar eclipse?
51. The position and length of shadow is affected by the position of sun, To what use this phenomenon put to?
52. Draw a diagram of lunar eclipse.
53. Differentiate regular reflection from irregular reflection.
54. List the properties of image formed by a plane mirror.
55. We often find that ambulance van needed for medical emergencies on front side have the word written inverted, why?
56. If I focus a beam light from a torch on a wall, I see patch of light on the wall. Now I focus the light of torch on the plane mirror and I find that patch appears on a different position on the wall, state why this happens.
57. How is the image formed by a plane mirror different from a shadow?
58. What do you understand by rectilinear propagation of light? Explain the things that happen because of this.

**Chapter 13**

**Magnets**

1. I have a picture which when brought near to an iron almirah stuck to it. State why did this happen?
2. Make a list of 6 0bjects used daily and predict whether they will be attracted by magnet or not.
3. Fill in the blanks
4. Metals like iron, steel and cobalt and alloys can be used to make \_\_\_\_\_\_\_\_\_ magnets.
5. A thin long piece of \_\_\_\_\_\_\_\_\_ when suspended freely is found to point in one direction only.
6. An \_\_\_\_\_\_\_\_\_\_\_\_ is a coil of insulated wire wound on a soft iron core.
7. Electromagnets are used in mobile cranes and in \_\_\_\_\_\_\_\_\_\_\_\_ and loud speaker.
8. The \_\_\_\_\_\_\_\_\_\_\_\_\_ of a magnet can be determined in terms of its attractive force.
9. At the centre the strength of a magnet becomes almost \_\_\_\_\_\_\_\_\_\_\_.
10. The pole of bar magnet that points towards the geographical north is called its \_\_\_\_\_\_\_\_ pole.
11. Two magnets kept close by with their \_\_\_\_\_\_\_\_ poles facing each other are seen to attract each other.
12. \_\_\_\_\_\_\_\_ poles repel and \_\_\_\_\_\_\_\_\_ poles attract each other.
13. The magnetic poles of the earth do not \_\_\_\_\_\_\_\_\_\_ with its geographical poles.
14. State whether given statements are true or false
15. Unlike poles of magnet repel each other.
16. The practical device based on the directive property of the bar magnet the magnetic compass.
17. A rod or needle can acquire some magnetism when we place them near bar magnet for some time.
18. The magnetic poles of the earth do not coincide with the geographical pole.
19. Multiple choice questions
20. A device that is based on directive property of bar magnet
21. Magnetic compass b) electromagnet c) telephone d) loudspeaker
22. Which ones are properties of magnet?
23. Directive property b) every magnet has 2 poles c) attractive property d) all the options
24. Two magnets when close by feel a pull towards each other because
25. Like poles repel b) unlike poles attract c) magnetism is lost
26. In the centre of the magnet the strength of a magnet is
27. Maximum b) minimum c) almost zero
28. Give reason for the following
29. When we place iron nails near magnet most of the nails get attracted to the end of bar magnet.
30. If we rotate a freely suspended magnet it always come to rest in a particular direction.
31. An electromagnet loses its magnetism when we switch of current.
32. Loadstone is a magnet.
33. If I take 2 bar magnets and place the magnets on a paper having iron fillings sprinkled on it.
34. Place 2 bar magnets with like poles facing each other.
35. Place 2 bar magnets with unlike poles facing each other

Write down the observation in both cases and explain reason for it.

1. Give examples
2. Natural magnet
3. Artificial or man-made magnet
4. Differentiate permanent magnet from temporary magnet.
5. Name a commonly used form of temporary magnet. How is it made?
6. List down the special property of a bar magnet.
7. What are different ways of making magnet?
8. Which property of magnet is used by compass? What is the compass made of?
9. What happens if magnets are not properly stored?
10. How is magnetic material different from non-magnetic material?
11. Earth acts as huge magnet, explain.
12. When was the first compass invented? What was used by Chinese sailors used before that ?
13. Why should not we place magnets near computer, cell phones or DVD?
14. What will happen if we place bar magnets at the two ends of a large table?
15. How can we find out the poles of a bar magnet?