1. Why does the breathing become faster during exercise?

2. Whenever we feel drowsy or sleepy we start yawning. Does yawning help us in anyway?

3. What will happen if our diaphragm shows no movement?

4. Why does a frog have a dual mode of breathing?

5. How does sneezing protect us from germs?

6. What is dialysis? What type of patients are put on dialysis machine?

7. Give reasons for the following:
   {a} Arteries have thick and elastic muscular walls.
   {b} Arteries are generally not easily seen.
   {c} Veins have thin and less muscular walls.

8. How does transpiration help in the transport of water and minerals in plants?

9. Xylem transports sap upwards only whereas phloem transports food in one direction. Why do you think there is a difference?

10. WBCs are often called the soldiers of the body. Why?

11. Veins have valves which allow blood to flow only in one direction. Arteries do not have valves. Yet the blood flows in one direction only. Can you explain why?

12. A beggar begs for some eatables from Riya. She finds some bread in her kitchen. But, these are covered with some greenish-black patches. So, she gives some fruits to him.

   a. What are these greenish-black patches found on the bread called? How do they reproduce?

   b. What value do you learn from Riya?
13. What would happen if all the seeds of a plant were to fall at the same place below the plant and grow there?

14. Why are flowers generally so colourful and fragrant? If flowers are not so colourful and sweet smelling, will fruit formation be seen in these plants?

15. In the following figure the parts whose functions are given and give their names.
   a. The part which contains pollen grains.
   b. The part where the female gamet is formed.
   c. The female reproductive part where pollen grains germinate.

16. The distance between two stations is 300 km. A train takes 5 hours to cover this distance. Calculate the speed of the train.

17. Complete the data of the table given below with the help of the distance –time graph given in the figure given along side.

<table>
<thead>
<tr>
<th>Distance [m]</th>
<th>0</th>
<th>4</th>
<th>?</th>
<th>12</th>
<th>16</th>
<th>20</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time [s]</td>
<td>0</td>
<td>2</td>
<td>4</td>
<td>?</td>
<td>8</td>
<td>10</td>
</tr>
</tbody>
</table>

18. A coil suspended freely, points in some direction when no current is passed through it. Can you tell what will happen when a current is passed through it.

19. Why are compact fluorescent lamp preferred over electric bulbs?

20. Why is an electric fuse required in all electrical appliances?

21. Can we use the same fuse in a geyser and a television set? Explain.

22. Nikita’s grandmother is not able to see distant objects properly. Nikita takes her to the nearby eye specialist.
   a. Which type of lens would be suggested by doctor for her grandmother?

23. Why do automobiles, the rear view mirror has warning written as “object seen in the mirror maybe closer than they appear”?
24. Write down the English alphabet in which the image formed in the plain mirror appears to be the same as the alphabet. Give reasons.

25. Roshan made light from a laser torch to fall on a prism. Will he able to observe a band of seven colours? Explain with the reason.

26. A shopkeeper wanted to fix a mirror which will give a maximum view of his shop. What type of mirror should be used? Give reason.

27. What is the difference in the image formed, when you look through a small and large-sized plane mirror?

28. Nikita studies in class 7. One day, she studies about water in her class. She comes home, calls her friends, prepares pamphlets on the tips to save water and distributes in her colony.

   a. Why do you think that saving water is important for us?
   b. What happens to the water table during [a] heavy rainfall, [b] drought?
   c. What can we learn from Nikita?

29. Describe the mismanagement of water at the individual level [household level]

30. Explain how deforestation can lead to depletion of ground water.

31. Some definitions are given below which can be corrected by changing one word. Correct them.

   [a] Aquifer is ground water stored between the layers of hard rock above the water table.

   [b] The process of evaporation of water in the ground is called infiltration.

   [c] The evaporation of water from oceans its arrival back into the ocean is called vapour cycle.

32. What are the ways to conserve forests?

33. Explain how decomposers help in maintaining the supply of nutrients to the
growing plants in the forest.

34. Preethi while moving in a forest observed that there was no noise pollution, though lots of heavy vehicle were passing from the nearby highway. Explain why?

35. Two friends shared their experiences of their vacation trip to two different forests. Do you think they would have seen the same type of plants and animals during their respective trips? Give reasons.

36. Deforestation may lead to floods. Why?

37. Why is discharge of untreated sewage into the water bodies not desirable?

38. Why do fishes die due to the excessive water pollution?

39. Ravi sees a man falling into a manhole. He shouts for help and get the man out of it safely.
   a. Where are the manholes provided?
   b. What is its use?

40. Why should we not through
   a. Used tea leaves into sink?
   b. Cooking oil and fats down the drain?

41. On a very cold morning Boojho & Paheli were talking with each other as they walked down to their school. They observed that the air coming out of their mouth looked like smoke, they were amused how it happened. Help them find the answer.

42. Whenever we feel drowsy or sleepy we start yawning. Why?

43. Insects and leaves of a plant have pores through which they exchange gases with
atmosphere. Can you write two points of difference between these poses with respect to their position, number and extension into the body.

44. What role does hair present in the nasal cavity play in the process of respiration.

45. Which gas present in air is essential for aerobic respiration, what is the role of oxygen during respiration?

46. Veins have valves which allow blood to flow only in one direction. Arteries do no have valves. Yet the blood flows in one direction only. can you explain why?

47. Coconut is a large and heavy fruit. How is it adopted for dispersal by water?

48. When you keep food items like bread and fruits outside for a long time especially during the rainy season, you will observe a cottony, growth on them.
   (a) What is this growth called?
   (b) How does the growth take place?

49. Write how the following Seeds are dispersed.
   (a) Seeds with wings.
   (b) Small and light seeds.
   (b) Seeds with spines / hooks.

50. What will happen to the size of an image if an object is brought towards the focus of a convex lens.

51. Boojho made light from a laser torch to fall on a prism, will he be able to observe a band of seven colours? Explain with reason.

52. A Shopkeeper wanted to fix a mirror which will give a maximum view of his shop. What
type of mirror should he use, give reason.

53. Paheli does not have a night lamp in her room. She covered the bulb of her room with a towel in the night to get dim light. Has she taken the right step? give one reason to justify your answer.

54. Why are fuse were not used in circuit containing electric cell?

55. Paheli while moving in a forest observed that there was no noise pollution though lots of vehicles were passing through the nearby highway. Explain why?

56. All the needs of animals living in a forest are fulfilled. justify this statement.

57. How are open drains harmful to human health?

58. A man travelling in a train threw an empty packet of food on the platform. Do you think this is proper waste disposal method? Elaborate.

59. A food stall owner was preparing dough for making bhaturas. He added a pinch of yeast & sugar to the dough and left it in a warm place. After a few hours, the dough had risen. There was sour smell too.
   a) Why did the dough rise?
   b) Why did it smell sour?
   c) Why was sugar added to the dough?
   d) What would have happened if the dough was kept in a refrigerator soon after it was prepared?

60. Whenever we feel drowsy or sleepy, we start yawning. Does yawning help us in anyway?

61. Respiratory organs in aquatic organisms are different from the respiratory organs in
terrestrial organisms. Explain with suitable examples.

62. It is not advisable to sleep under a tree during night time. Explain Why?

63. Raju was walking through a dusty road. He started sneezing. Why did this happen?
   Does sneezing help to keep our body safe?

64. While learning to ride a bicycle, Boojho lost his balance and fell down. He got bruises on
   his knees and started bleeding. However bleeding stopped after sometime.
   (a) Why did the bleeding stop?
   (b) What would be the colour of the wounded area and why?
   (c) What type of blood cells help in blood clotting?

65. Boojho observed some plants in his garden which had bud like structures on the leaf
    margins, he wondered what these plants were. Can you help him to identify
    the plant?
    Are these buds helpful to the plant?

66. Meera had been to a Seashore on a holiday where she saw many coconut trees. Why
    do coconut trees grow on sea shores?

67. Boojho made an electromagnet by winding 50 turns of wire over an iron screw. Paheli
    also made an electromagnet by winding 100 turns over a similar iron screw.
    Which electromagnet will attract Pins? Why?

68. During a Sunny day, a pool of water appears to lie on the road some distance ahead.
    What type of image (Virtual or real) do we see?

69. We can see objects when the light reflected from the objects fall upon our eyes. Why
can't walls act as mirror even the light is reflected through walls and reach our eyes.

70. Every part of the forest is dependent on the other parts. If we remove one component, all other components would be affected. Explain.