

Name:
Class: VISubject : Bio + Chem
Date :

1. (i) Describe the process of photosynthesis. Also give its equation.
(ii) What would happen to the life on earth in the absence of photosynthesis?
2. Describe how non-green plants obtain their food.
3. Name the following:
 - (i) Type of nutrition found in fungi, lichen, amarbel and pitcher plant
 - (ii) A parasite plant with long, yellow and slender stem
 - (iii) The pores in the leaves through which the exchange of gases takes place
 - (iv) A plant with both autotrophic and heterotrophic mode of nutrition
 - (v) The gas released during photosynthesis
4. Why does shearing not hurt the sheep?
5. How do we obtain silk fibre from the cocoon of silkworm? How is the pupa stage of silkworm different from the caterpillar stage?
6. How do the hair of certain animals help in keeping their bodies warm?
7. Paheli went to the market to buy sarees for her mother. She took out a thread from the edge of the two sarees shown by the shopkeeper and burnt them. One thread burnt with a smell of burning hair and the other burnt with a smell of burning paper. Which thread is from pure cotton saree and which one from a pure silk saree? Give reason for your answer.
8. Name the source from which litmus solution is obtained. What is the use of litmus solution?
9. What happens when a base is put on a turmeric paste?
10. You have been provided with three test tubes containing distilled water, an acidic and basic solution respectively. How will you identify the contents using a blue litmus paper?
11. What is the effect of china rose indicator on acidic and basic solutions?
12. How do you treat the soil: if it is too acidic and if it is too basic?
13. Explain the process of neutralisation with the help of an example related to daily life.
14. Describe how crystals of copper sulphate are prepared.
15. Why burning of wood and cutting it into smaller pieces are considered as two different types of changes?
16. What are the two important conditions for rusting? Explain why rusting of objects is faster in coastal areas than in deserts?
17. Give suitable reactions for the following:
 - When Magnesium ribbon is burnt in presence of air
 - When magnesium oxide is dissolved in water

18. List the differences between
 - a. top soil and subsoil
 - b. sandy soil and clayey soil
19. What is percolation of water? How is the percolation rate different for different soils?
20. How are living organisms important for improving soil fertility?
21. It is observed that 8-10 days after the rains, the level of water in a well rises. Explain which type of soil would allow rainwater to reach the well faster and why?
22. How can you show or find out the following:
 - The amount of water(moisture content) present in soil
 - The presence of particles of different sizes in soil
 - The percolation rate of water in a soil
 - The amount of water absorbed by the soil
23. When does anaerobic respiration take place in humans? Accumulation of which chemical compound causes muscle cramps?
24. Name and define the two main processes in respiration. Also mention the end products of respiration.
25. State reason why-
 - a. We sneeze when we inhale dust –laden air
 - b. An athlete breathe faster after finishing a race
26. How do the following organisms breathe?
 - Cockroach
 - Earthworm
 - Frog
 - Fish
 - Humans
27. Why is it necessary to excrete waste products? Draw a neat well labeled diagram of human excretory system.
28. (a)Name the only artery that carries CO₂ rich blood.
(b)Why is it called an artery if it does not carry O₂ rich blood?
29. What is dialysis? When does it become necessary to take such a treatment?
30. (i) 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?
(ii) What is the special feature present in a human heart which does not allow mixing of blood when O₂ rich blood and CO₂ rich blood reach the heart?
31. Sometimes doctors inject medicines directly into our bloodstream. Where do they inject it, in the artery or in the vein? Explain why.
32. How does sexual reproduction takes place in flowering plants? What happens during fertilization in plants?
33. Describe the various ways by which seeds are dispersed(Give examples also). Why is scattering of seeds important?
34. a.What is vegetative propagation? Write its advantages.
b. How does spirogyra propagate?

35. What is the function of a flower? Draw a well labeled diagram of the reproductive parts of a flower.
36. Give reason:
 - i. Pollen grains are light.
 - ii. Spores have thick walls.
37. Name two chemicals that are used to disinfect water.
38. What is sewage? Why is it harmful to discharge untreated sewage into water bodies?
39. How are septic tanks toilets useful in rural areas?
40. Explain the measures that can be taken by us to keep our surroundings hygienic.
41. What is the role of aerobic bacteria in wastewater treatment plants?
42. 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 reason.
43.
 - a. Give any four factors which are responsible for the destruction of forests.
 - b. Deforestation may lead to floods. Why?
44. What is meant by canopy? How is it different from the crown of a tree?
45. Describe the role of decomposers in a forest.