1. Bacteria cannot be seen with the naked eyes, but these can be seen with the help of a microscope. If you have to carry a sample from your home to your biology laboratory to demonstrate the presence of microbes under a microscope, which sample would you carry and why?
2. Give examples to prove that microbes release gases during metabolism.
3. In which food would you find lactic acid bacteria? Mention some of their useful applications.
4. Name some traditional Indian foods made of wheat, rice and Bengal gram (or their products) which involve use of microbes.
5. In which way have microbes played a major role in controlling diseases caused by harmful bacteria?
6. Name any two species of fungus, which are used in the production of the antibiotics.
7. What is sewage? In which way can sewage be harmful to us?
8. What is the key difference between primary and secondary sewage treatment?
9. Do you think microbes can also be used as source of energy? If yes, how?
10. Microbes can be used to decrease the use of chemical fertilisers and pesticides. Explain how this can be accomplished.
11. Three water samples namely river water, untreated sewage water and secondary effluent discharged from a sewage treatment plant were subjected to BOD test. The samples were labelled A, B and C; but the laboratory attendant did not note which was which. The BOD values of the three samples A, B and C were recorded as 20mg/L, 8mg/L and 400mg/L, respectively. Which sample of the water is most polluted? Can you assign the correct label to each assuming the river water is relatively clean?
12. Find out the name of the microbes from which Cyclosporin A (an immunosuppressive drug) and Statins (blood cholesterol lowering agents) are obtained.
13. Find out the role of microbes in the following and discuss it with your teacher.
    (a) Single cell protein (SCP)
    (b) Soil
14. Arrange the following in the decreasing order (most important first) of their importance, for the welfare of human society. Give reasons for your answer.
    Biogas, Citric acid, Penicillin and Curd
15. How do biofertilisers enrich the fertility of the soil?