



# **BIOLOGY**

## **BOOKS - OSWAAL BIOLOGY**

### **(KANNADA ENGLISH)**

#### **MICROBES IN HUMAN WELFARE**

**Topic 1 Microbes In Household And Industrial Products In Sewage Treatment And Biogas Very Short Answer Type Questions**

**1. What are Floccs?**



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**2. Expand B.O.D.**



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**3. Name a bacterium used in the production of Swiss cheese.**



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4. In which way have microbes played a major role in controlling diseases caused by harmful bacteria?



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5. What would have happened if antibiotics were not discovered?



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6. Why is distillation required for producing certain alcoholic drinks?



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7. List any two industrially important enzymes.



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8. Name an immune suppressive agent?



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**9.** Name a bacterium that is involved in the conversion of milk into curd.



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**10.** Give the scientific name of baker's yeast.



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**11.** Name the vessels in which microbes are grown in the large scale industrial production.



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**12.** Name a fungus from which penicillin antibiotic is obtained.



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**13.** Name an organic acid produced by *Aspergillus niger*.



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**14.** Which bacterium is used in the preparation of acetic acid?



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**15.** Name the microorganism which produces butyric acid.



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**16.** Name a chemical produced by streptococcus bacterium used as a clot buster, for removing clots from the blood vessels of patients who have undergone myocardial infarction.



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17. Name the fungus that produces cyclosporin

A.



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18. Cyclosporin-A is produced by a fungus called Trichoderma polysporum. Write its significance.



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**19.** Name a chemical produced by the yeast *Monascus purpureus* used as blood cholesterol lowering agents.



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**20.** Statins used as blood cholesterol lowering agents. Name the fungus that produces Statins.



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**21. How does statin work?**



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**22. What is sewage ? In which way can sewage be harmful to us?**



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**23. Define Biochemical Oxygen Demand (BOD).**



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**24.** How does BOD of sewage water determine polluting potential?



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**25.** What is a biogas?



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**26.** Name a bacterium involved in the production of biogas.



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**27.** Write the scientific name of the fungal micorbe used for fermenting maked cereals and fruit juices.



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**28.** What causes dough of flour?



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**29.** Expand the term STP.



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**30.** Mention the role of Methanobacterium in rumen of cattle.



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**31.** Mention the importance of Lactic acid bacteria to humans other than setting milk to curd.



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**32.** What is the chemical nature of biogas?



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**33.** Mention the three enzymes of industrial importance.



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## **Topic 1 Microbes In Household And Industrial Products In Sewage Treatment And Biogas Short Answer Type Questions I**

**1.** List any two bio active molecules of fungal origin and explain how these molecules help in restoring good health in humans.





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2. Give examples to prove that microbes release gases during metabolism.



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3. In which food would you find lactic acid bacteria? Mention some of their useful applications.



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4. Name any two species of fungus, which are used in the production of the antibiotics.



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5. Do you think microbes can also be used as sources of energy? If yes, how?



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6. Find out the name of the microbes from which Cyclosporin A (animmuno-suppressive drug) and Statins (blood chloesterollowering agents) are obtained.



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7. What is a broad spectrum antibiotic? Name a broad spectrum antibiotic and source organism.



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**8.** Name a microbe used for statin production.

How do statins lower blood cholesterol level?



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**9.** How was penicillin discovered?



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**10.** Name any two distilled and undistilled alcoholic beverages.



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**11.** What is activated sludge in a sewage treatment tank? How this activated sludge is used?



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12. Name the source of streptokinase. How does this bioactive molecule function in our body?



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## Topic 1 Microbes In Household And Industrial Products In Sewage Treatment And Biogas Short Answer Type Questions li

1. What is the key difference between primary and secondary sewage treatment?



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2. Explain different stages involved in sewage treatment.



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**Topic 1 Microbes In Household And Industrial Products In Sewage Treatment And Biogas Long Answer Type Questions li**

1. Draw a neat labelled diagram of a typical Biogas plant.



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2. Write a note on a typical biogas plant. Explain how microbes help in the production of biogas.



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**3. (a) Describe the roles of:**

(i) Microbes in biogas production

(ii) Mycorrhiza as biofertilizer



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**4. Explain the role of microbes in household food products.**



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5. Describe the role of Microbes in sewage treatment plant.



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6. Write the scientific name of a microbe from which following product is obtained:

- a. Statins
- b. Penicillin
- c. Citric acid

d. Streptokinase

e. Cyclosporin -A



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## Topic 2 Microbes As Biocontrol Agents And As Biofertilisers Very Short Answer Type Questions

1. Mention the role of Azospirillum as biofertiliser.



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2. What are biofertilisers?



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3. How do biofertilizers enrich the fertility of the soil?



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4. What are nucleopolyhedroviruses being used for now a days?





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5. What is the biocontrol?



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6. Name a bacterium that is present in the root nodules and fix atmospheric nitrogen.



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7. Name the genus to which Baculoviruses belong.



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8. How does *Bacillus thuringiensis* (Bt) used to protect plants from butterfly caterpillars?



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**9.** How is the presence of cyanobacterial in the paddy fields beneficial to rice crop?



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**10.** What are baculoviruses?



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**11.** Name a genus of fungi that forms a mycorrhizal association with plants.



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## Topic 2 Microbes As Biocontrol Agents And As Biofertilisers Short Answer Type Questions I

1. Discuss the role of fungi as biofertilizers.



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2. How has the bacterium *Bacillus thuringiensis* helped us in controlling caterpillars of insect pests?





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3. How is the mycorrhizal association helpful in absorption of water and minerals in plants?



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4. Name any two free living bacteria that fix atmospheric nitrogen and increase nitrogen content in the soil.



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5. How does anabaena and mycorrhiza act as biofertilisers?



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6. Why is Rhizobium called as symbiotic bacterium? How does it act as a biofertiliser?



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7. Write any two advantages of biofertilisers.



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8. Legumes fertilise the soil but cereals do not.

Discuss.



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**Topic 2 Microbes As Biocontrol Agents And As Biofertilisers Short Answer Type Questions Ii**

1. Microbes can be used to decrease the use of chemical fertilizers and pesticides. Explain how this can be accomplished.



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2. Mycorrhiza, a fungus symbiotically associated with root of few plants. List any three benefits for plants from Mycorrhiza.



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**3.** Briefly describe the role of biological control of pests and diseases.



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## **Topic 2 Microbes As Biocontrol Agents And As Biofertilisers Long Answer Type Questions li**

**1.** Briefly describe the role of biological control of pests and diseases.



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2. Explain the role of any five microbes which enriches soil nutrients.



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## Topic 2 Microbes As Biocontrol Agents And As Biofertilisers Multiple Choice Questions

1. The vitamin whose content increases following the conversion of milk into curd by lactic acid bacteria is

A. Vitamin C

B. Vitamin D

C. Vitamin B12

D. Vitamin E

**Answer:**



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2. Waste water treatment generates a large quantity of sludge, which can be treated by

A. Digesters

B. Activated sludge

C. Chemicals

D. Oxidation pond

**Answer:**



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