



# BIOLOGY

## BOOKS - ARIHANT PRAKASHAN

### MICROBES IN HUMAN WELFARE

#### Topic 1 Practice Questions 1 Mark Questions

1. Fill in the blanks: Fermentation of milk sugar  
, \_\_\_\_\_ is done by Lactobacillus ..

A. glucose

B. fructose

C. sucrose

D. lactose

**Answer: D**



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2. In secondary treatment of sewage in open bioreactors , the microorganisms grow and multiply to form \_\_\_\_\_

A. manure

B. compost

C. sludge

D. sediment

**Answer: C**



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**3.** In curd making, ..... is useful in coagulation of milk protein.

A. Penicillium

B. Lactobacillus

C. Saccharomyces

D. Aspergillus

**Answer: B**



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**4. Fill in the blanks:**Yeast Acetobacter are both involved in the production of \_\_\_\_\_ from carbohydrate.

A. penicillin

B. cirate

C. methane

D. vinegae

**Answer: D**



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5. In ethyl alcohol production, the unicellular fungus, Penicillium is used.



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6. Citric acid is produced when fermentation is caused by ..... (Lactobacillus, Aspergillus sp. Penicillium sp., Acetobacter sp.)



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7. Lipase enzyme is produced by the activity of

A. *Trichoderma viridie*

B. *Rhizopus sp.*

C. *Aspergillus* sp

D. None of the above

**Answer: b**



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**8.** The antibiotic Streptomycin is obtained from

A. *Streptomyces griseus*

B. *Streptomyces aureofaciens*

C. Streptomyces nouresi

D. Streptomyces notaium

**Answer: A**



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**9. Fill in the blanks**

Acetobactor converts \_\_\_\_\_ to vinegar by aerobic fermentation of legumes?



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10. Fill In The blank : Ethanol obtained by \_\_\_\_\_ fermentation is used in industry .



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11. The ..... from secondary treatment of sewage is generally released into ..... water bodies.



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**12.** Antibiotic tetracycline is obtained from *Penicillium notatum*,



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**13.** The first antibiotic to be extracted from bacterial culture was nystatin.



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**14.** correct the statement if required Industrial production of organic acids through microbial cultures is due to the oxidation process by bacteria.



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## Topic 1 Practice Questions 2 Mark Questions

**1.** Write a short note on alcoholic fermentation.



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2. Write a short note on secondary treatment of sewage.



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3. Write Shortnotes on: Microbes in industrial products



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4. What gases are produced in anaerobic sludges digesters ?



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## Topic 1 Practice Questions 3 Mark Questions

1. Differentiate between bakery and brewery .



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



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## Topic 1 Practice Questions 7 Mark Questions

1. Answer within 200 words : Discuss how waste water treatment can be done .



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2. Give a detailed account of industrial application of microbes.



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## Topic Test 1

1. Milk enzyme that coagulates during curd formation is

A. protease

B. casein

C. rennin

D. pectinase

**Answer: B**



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2. Antibiotics are used to cure deadly diseases such as plague, whooping cough and diphtheria.



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3. During the secondary treatment of primary effluents, the BOD level.....



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4. What is the commercial name of acetic acid?



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5. The process of ..... involves beating and cooling of milk for inactivation of microbes .



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6. An enzyme used for the clarifying bottled fruit juice.



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7. During sludge digestion, bacteria produce gases like.....



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8. An organic acid produced by penicillium is

.....



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9. Write a short note on production of curd using microbes.



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10. Write a note on treatment of sewage.





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## Topic 2 Practice Questions 1 Mark Questions

1. The major component of biogas is carbon dioxide.



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2. Fill in the blank: In pest control of crop plants \_\_\_\_\_ has pesticidal properties.



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3. Fill In The blank : BGA used in biological nitrogen fixation are called \_\_\_\_\_ bacteria .



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4. Fill In The blank : In biogas production \_\_\_\_\_ bacteria are used .



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5. In biogas, methane is produced due to the activities of nitrogen-fixing bacteria.



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6. What is called the accumulated microorganisms and organic matter in the treatment of sewage?



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7. What is the major component of biogas ?



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8. What can be called the natural pest killing agent other than artificial chemical?



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9. What is called the association between Rhizobium in the root system of legumes?



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## Topic 2 Practice Questions 2 Mark Questions

1. Write notes with 2 to 3 important points

*Bacillus thuringiensis*



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2. Write Shortnotes on: Biocontrol agents



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**3. Write note on :**

**Biogas Production.**



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## **Topic 2 Practice Questions 3 Mark Questions**

**1. Differentiate between Chemical Fertilizers and Biofertilizers.**



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## 2. Synthetic pesticides and Biopesticides



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## Topic 2 Practice Questions 7 Mark Questions

1. Which one of the following microbes is used as biocontrol agent?



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2. Explain how microbes are useful in pollution control and also in production of alternative source of energy.



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## Topic Test 2

1. A major component of gobar gas is

A. ammonia

B. methane

C. ethane

D. butane

**Answer: B**



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2. Which is a microbial insecticide?

A. *Bacillus thuringiensis*

B. *subtilis*

C. *polymyxa*

D. laevis

**Answer: A**



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**3. Answer in one word only**

..... absorbs free nitrogen from the soil , air and converts it into salts of nitrogen compounds to enrich the soil nutrients .



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4. What can be called the natural pest killing agent other than artificial chemical?



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5. In paddy fields, blue-green algae fix phosphorus to enrich the soil fertility.



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6. Rhizobium is a ..... bacteria that serves as biofertiliser.



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7. Write a short note on cyanobacteria as biofertiliser.



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**8.** Write a short note on Trichoderma as a biocontrol agent.



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**9.** Difference between : Symbiotic nitrogen-fixation and Non Symbiotic nitrogen-fixation.



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**10.** Write notes with 2 to 3 important points

*Bacillus thuringiensis*



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## Chapter Test

**1.** Organisms called methanogens are most abundant in a

A. polluted stream

B. hot spring

C. sulphur rock

D. rumen of cattle

**Answer: D**



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2. Which of the following is mainly produced by the activity of anaerobic bacteria on sewage ?

A. Mustard gas

B. Biogas

C. Laughing gas

D. Propane

**Answer: B**



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**3. Secondary sewage treatment is mainly a:**

A. chemical process

B. biological process

C. physical process

D. mechanical process

**Answer: B**



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**4. Choose the correct option**

Which of the following products used in detergent industry is derived from *Rhizopus* sp?

A. Protease

B. Lipase

C. Cellulase

D. pectinase

**Answer: B**



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5. Name the molecules which are used as blood cholesterol lowering agents?



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6. Azospirillum and Azotobacter are .....  
bacteria.



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7. .... are used as biocontrol agents to get rid  
of mosquitoes.



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## 8. Fill in the blanks

Viable biogas is produced in large vessels called .....



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9. Plants with mycorrhizal association show tolerance to ..... and .....



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**10.** Baculoviruses belonging to the genus *Penicillin* are used as agents of biological control .



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**11.** Mycorrhizae provide cobalt to the roots of plants.



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**12.** *Bacillus thuringiensis* is a Gram-negative bacteria.



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**13.** correct the sentence if required  
Baculoviruses are single-stranded RNA viruses.



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**14.** Write short note on harmful effects of chemical pesticides.



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**15.** Write short note on enzymes produced by microbes.



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**16.** What is the role of biotechnology in manipulating nitrogen -fixing property in crop plants?



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**17.** Differentiate between Biopesticides and biocontrol agents .



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**18.** Differentiate between: Primary sludge and activated sludge



**Watch Video Solution**

**19.** Give a detailed account of industrial application of microbes.



**Watch Video Solution**

**20.** Write a detailed account of biogas production.



**Watch Video Solution**