Micro-organism in Human Welfare

CHAPTER-8

1. Which is the nitrogen fixing bacterium that forms association with Azolla in paddy cultivation?

- (a) Spirulina
- (c) Frankia
- (b) Anabaena
- (D) Toli Pethix

(B)2. Cyanobacteria are used as bio-fertilizer in fields-

- (a) wheat
- (b) Maize
- (c) paddy
- (d) Sugarcane
- **(**C)

3. Scientist who received the Nobel Prize for discovering "Penicillin" and confirming it as an antibiotic -

- (a) Alexander Fleming
- (b) Ernest Chan
- (c) Howard Florey
- (d) all of the above
- (D)

4. The bacteria used in cow dung gas plant is-

(a) Nitrifying bacteria

- (b) Methanogen
- (c) Ammonicaric bacteria
- (d) denitrifying bacteria

(B)

5. What is present in maximum quantity in cow dung gas (biogas)?

(a) wheaten

(b) methane

(c) propane

(d) CO₂

(B)6. 'Against Life' is related to-

- (a) Antibiotics
- (b) bacteria
- (c) fungus
- (d) algae

(A)

7. Which of the following pairs is of organic fertilizer?

- (a) Azolla and BGA
- (b) Nostoc and legume
- (c) Rhododendron and grass
- (d) Salmonella and E.coli
- (A)8. Which one of the following pairs is wrong?

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(a) Coleiformus – Vinegar

(b) Methanogens – Gaubar gas

(c) Yeast – Ethanol

(d) Pseudomycetes-antibiotic

(A)

9. Decomposition of organic matter in sewage occurs by microorganisms-

- (a) In first aid
- (b) in secondary treatment
- (c) in the third treatment

(d) all of the above

(B)

10. While working on which bacteria, Fleming got the opportunity to discover penicillin?

- (a) Streptococcus
- (b) Escherichia coli
- (c) Staphylococcus
- (d) Rhizobium
- **(**C)

11. BOD of treated sewage as compared to untreated sewage -

- (a) will be less
- (b) will be more
- (c) will be the same
- (D) Cannot be said

(A)

12. In India, the technology of biogas production from cow dung was developed

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mainly due to whose efforts-

- (a) Gas Authority of India
- (b) Oil and Natural Gas Commission
- (c) Indian Agricultural Research Institute
- (d) Indian Oil Corporation

(C) Very short Answer: questions –

1. What is pigment?

Answer: The mesh-like group or group formed by bacteria and fungal filaments is called pollen

2. Write the names of the insects that control aphids and mosquitoes.

Answer: Beetles control aphids and dragon flies control mosquitoes.

3. Write the names of the main gases found in biogas.

Answer: methane (50-70%), carbon dioxide (25-35%) and hydrogen (1-5%)

4. Cheese and yogurt are the products of which process?

Answer: fermentation

5. Which of the following vitamins increases in its nutritional quality as a result of lactic acid bacteria (LAB) converting milk into curd at appropriate temperature?

Answer: Vitamin B 12

Short Answer: questions:-

 (i) Write the name of the bacteria that converts milk into curd.
(ii) Explain two beneficial roles of the bacteria that convert milk into curd.

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Answer:

(i) Lactobacillus lactic and other LAB (Lactic Acid Bacteria)

(ii) Increasing the mass of Vitamin B.

(iii) Preventing diseases caused by microorganisms in our stomach. 8.

- 2. Define antibiotic. Penicillin is obtained from which fungus?
- 3. What causes the large holes in Swiss cheese? Explain.

Answer: The large holes found in Swiss cheese are caused by the large amounts of CO produced by a bacterium called Propionibacterium charmanii

4. What do you mean by fermenter? Which bacteria is used in the production of acetic acid?

Answer: At the industrial level, microorganisms require large vessels to obtain products through action (fermentation), which are called fermenters. Acetic acid is produced by Acetothecter acetae (bacteria).

- 5. BOD Write the full name of. What do you mean by BOD of a reservoir?
- 6. Name the bacterial product modified by genetic engineering, which is used in the removal of clot from the blood vessels of a patient undergoing myocardial infarction (thrombus lysis).

Answer: Streptokinase (produced by Streptococcus bacteria)

7. (a) Which fungus is used in the treatment of plant diseases under biological control?

(b) Why does bottled fruit juice purchased from the market appear clearer than home-made juice?

Answer:

(a) Trichoderma

(b) Due to the use of pectinases and proteases

8. First of all write the name of the antibiotic and the name of its discoverer.

Answer: The first antibiotic is penicillin, it was discovered by Alexander Fleming.

9. What is called Baker's yeast and Brewer's yeast?

Answer: To Saccharomyces cerevisiae

- 10. Explain the use of microorganisms in fermented beverage production with examples.
- 11. If the glands located on the roots of a leguminous plant are destroyed, what will be the effect on the plant? Explain the reason.
- 12. How will the field be affected due to increased population of algae like Nostoc and Anabaena in waterlogged fields? Explain the reason.
- 13. If fungus is removed from the fungal root of a plant, which functions of the plant will be affected? Explain with reasons.
- 14. Which virus is suitable for controlling insects and arthropods and which genus does it come under?

Answer: virus baculovirus Genus - Nucleopolyhidrosis Virus

15. Write the names of two free bacteria that fix atmospheric nitrogen.

Answer: 1. Azospirillum

2. Ejectobacter

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16. Name those cyanobacteria which are used as biofertilizers?

Answer: Nostoc, Anabaena, Oscillatoria.

- 17. If microorganisms are removed from sewage, what will be the effect on its treatment? Please clarify.
- 18. Write the uses of any two organisms under biological control.

Answer:

- (i) Dragonfly- Useful to get rid of mosquitoes.
- (ii) Beetle: It is useful in getting rid of aphids.
- 19. What fermentation conditions are necessary to be maintained while producing biogas? Write only three.

Answer:

1. Fermentation should be carried out in a completely anaerobic environment and there should be no free oxygen present.

2. pH inside the fermenter 6.8 to 7.6 Should be maintained at approximately neutral level.

3. Methanogen bacteria should be present in fermentation.

20. How do organic fertilizers increase the fertility of soil?

Answer: Biofertilizer is a type of organism which provides nutrients to the soil.

21. Write the sources and uses of the following bioactive molecules:

(1) 'Cyclosporin - A'(2) Statins

22. How is biogas produced? Draw a labeled diagram of a biogas plant.

Answer: When mechanogenic bacteria called Methanobacterium

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