

SECTION A : TICK THE CORRECT OPTION:

1. What is the primary role of microorganisms in the nitrogen cycle?
a) Breaking down dead organisms b) Fixing atmospheric nitrogen into soil
c) Producing oxygen d) Photosynthesis
2. Which microorganism is used in the production of antibiotics?
a) Bacteria b) Fungi c) Viruses d) Algae
3. Which of the following is a beneficial microorganism found in the human gut?
a) Pathogenic bacteria b) Antibiotic-resistant bacteria
c) Lactobacillus d) Mycobacterium
4. Which microorganism is known for its role in nitrogen fixation in the soil?
a) Rhizobium b) Penicillium c) Aspergillus d) Saccharomyces

SECTION B: ASSERTION- REASON QUESTIONS:

1. Disease which spreads from an infected person to healthy person is known as non – communicable disease.
Reason: The disease spreads from one person to another through air, water, food, physical contact or insect.
2. Assertion : The parasitic fungi cause a number of diseases in plants.
Reason : Fungi are involved in nutrient cycling.
Choose the correct option:
(a) Both assertion (A) and reason (R) are true and reason (R) is the correct explanation of assertion (A).
(b) Both assertion (A) and reason (R) are true but reason (R) is not the correct explanation of assertion (A)
(c) Assertion (A) is true but reason (R) is false.
(d) Assertion (A) is false but reason (R) is true.

SECTION C: CASE STUDY BASED QUESTIONS:

Take ½ kg flour (atta or maida), add some sugar and mix with warm water. Add a small amount of yeast powder and knead to make soft dough. Also take a 500 mL beaker filled upto ¾ with water. Dissolve 2-3 teaspoons of sugar in it. Add half a spoon of yeast powder to the sugar solution. Now observe and smell the solution.

Answer the following question based on your reading of the paragraph:

- a) Why is yeast used in baking industry for making breads and cakes?
- b) Define fermentation.
- c) Who discovered fermentation and when?

SECTION D: ANSWER THE FOLLOWING QUESTIONS:-

1. How are viruses different from other microorganisms?
2. Who discovered the first vaccine and for what?
3. What are vaccines? How do they work?
4. How do microorganisms help to clean the environment or recycling of nutrients?
5. What are communicable diseases? How does house fly spread diseases?
6. What are the indicators/symptoms of spoiled food?
7. What is the food poisoning? How and why is it caused?
8. Name different methods of food preservation and the food preserved by them?
9. Explain nitrogen cycle and draw its diagram