



General Instructions:

- This question paper consists of 10 questions in 5 sections.
- All questions are compulsory. However, an internal choice is provided in some questions. Student is expected to attempt only one of these questions.
- Section A** consists of six objective type questions carrying 01 mark each.
- Section B** consists of one very short question carrying 02 marks.
- Section C** consists of one short answer type question carrying 03 marks.
- Section D** consists of one question carrying 05 marks.
- Section E** consists of one case-based question carrying 04 marks with sub-parts.

SECTION – A

Select and write the one most appropriate option out of the four options given for each of the questions 1 to 4.

Questions

1 A student setup an experiment to study the growth of plants. The student used three potted plants with same amount of soil and additionally added manure in pot A, fertiliser in pot B and left the pot C undisturbed. After 3 months, the student measured the growth of each plant.

Pot	Initial Growth (cm)	Final Growth (cm)
A	10	25
B	10	35
C	10	18

The student again experimented and used the same soil for planting new plant. The table shows the growth of each plant after 3 months.

Pot	Initial Growth (cm)	Final Growth (cm)
A	10	28
B	10	20
C	10	18

What can the student analyse from the experiment?

- Manure is less effective than fertilisers
- Fertilisers and manure both decrease the soil's fertility
- Use of fertilisers repetitively reduces the soil fertility
- Growth of the plant is better when fertilizers are used instead of manure

2 What makes viruses different from the bacteria?
(a) microscopic size (b) dependency on living cells
(c) requirement of moist conditions (d) requirement of food

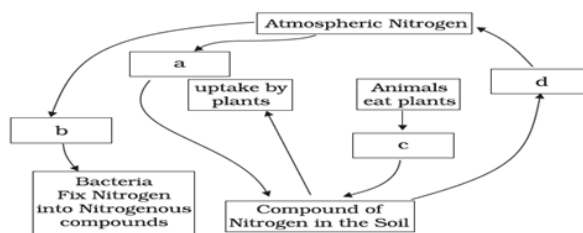
3 Seema mixes some maida flour with water and sugar. She also adds small amount of yeast powder in the mixture. After two hours, she see saw that the dough rises. What made the dough to rise?
(a) The division of yeast cells and production of gas.
(b) The reaction of maida flour with sugar.
(c) The release of energy by yeast cell after consumption of maida flour.
(d) The release of heat due to enlargement of yeast cells.

SECTION – E

10 (c) In polio vaccination, the dead microbes are introduced into the children's body. How does this vaccination protect the children from polio? Explain

4

(d) Identify a, b, c, d in the given figure.



OR

(b) Give reasons for the following.

- (i) Fresh milk is boiled before consumption while processed milk stored in packets can be consumed without boiling.
- (ii) Mosquitoes can be controlled by preventing stagnation of water though they do not live in water. Why?

2. Which of the following statement is not true for organic manure?

- (a) It enhances water holding capacity of soil. (b) It has a balance of all plant nutrients.
(c) It provides humus to soil. (d) It improves texture of soil

Which of the following is not true for fertilisers? (a) They increase the yield. (b) Their excessive use disturbs the balance of nutrients in soil. (c) They are generally used in small quantity. (d) They are environment friendly.

Which activity of the farmer can promote growth of earthworms and microbes in the field?

Pathogenic micro-organisms present in host cells are killed by medicines called

- (a) pain killer (c) antibiotics (b) antibodies (d) vaccines

Why should we avoid standing close to a tuberculosis patient while he/she is coughing?

1. This tool for sowing seeds ensures equal distribution of seeds and also saves time and labour.

- (a) hoe (b) plough (c) seed drill (d) both (a) and (b)

2. Which of the following cannot be provided to the soil by a chemical fertilizer ?

- (a) nitrogen (b) humus (c) potassium (d) phosphorus

3. Assertion: Excessive use of fertilizers makes the soil more fertile.

Reason: Fertilizers have become a source of water pollution.

4. Assertion: Appropriate distance between the seeds is necessary to avoid overcrowding of plants.

Reason: Seeds should not be covered by the soil after sowing.

- 2.(c) 3.(b) 9.(d) 10.(c)

Assertion: The earthworms are related to as the farmers friends.

Reason: Earthworms help the breakdown of complex organic matter as well as loosening of soil.

. Which of the following diseases is caused by bacteria?

- a) Chicken pox b) Tuberculosis c) Dengue d) Polio

Which of the following microbes is present in our intestine as a friendly microbe?

- a) Streptococcus b) Lactobacillus c) E. coli d) Yeast

12. Define vaccine. How do vaccines help in preventing diseases?

Q13. Mention the category to which the following microorganisms belong to?

- a) Chlamydomonas b) Bacteriophage c) Penicillium d) Paramecium

Q14. State the role of yeast in increasing the volume of kneaded dough.

12. Refer NCERT, T.B. Page no. 21.

13. a) Algae b) Virus c) Fungi d) Protozoa

14. Bubbles of CO₂ gas produced by yeast, fill the dough and increase its volume.

Which of the following is a communicable disease?

- a) Diabetes b) Chicken pox c) Alzheimer' d) Cancer

7. Which one of the following is not a method of food preservation?

- a) Salting b) Drying c) Boiling d) Pickling

8. A plant disease called citrus canker is caused by a _____ .

- a) Bacteria b) Fungi c) Protozoa d) Virus

6) b) Chicken pox 7) c) boiling 8) a) Bacteria

3. **Assertion:** Preservatives are added to food items.

Reason: Preservatives inhibit the growth of microorganisms.

ANS- a

A farmer wishes to use a tool for sowing seeds that protects the seed from being consumed by animals. Which type of tool should the farmer choose? (a) seed drill as it coats a chemical above the seeds (b) traditional tool as many seeds are sown together (c) seed drill as it covers the seeds with soil after sowing (d) traditional tool as seeds pass through a funnel-shaped tube

) Which statement associated with mosquito helps understand that malaria is a communicable disease? 28 (a) The causative agent of malaria is a protozoan. (b) The mosquito carries the parasite Plasmodium that causes malaria. (c) The mosquito lays its eggs in water collected in tyres, coolers, and open pits. (d) The parasite is transferred inside the body of a healthy person along with the mosquito bite

The decaying leaves and plant waste in our surroundings disappears after some time because of microorganisms. How do these microorganisms help clean our surroundings? (a) They convert dead organic waste into complex substances. (b) They convert dead inorganic waste into complex substances. (c) They convert dead organic waste into simple substances. (d) They convert dead inorganic waste into simple substances.

(a) Paheli watched her grandmother making mango pickle. After she bottled the pickle, her grandmother poured oil on top of the pickle before closing the lid. Paheli wanted to know why oil was poured? Can you help her understand why?

Explain why, the seeds should be sown at right spacings.
What precautions should be taken in sowing the seeds ?