CBSE Test Paper 02

Chapter 15 Improvement in Food Resources

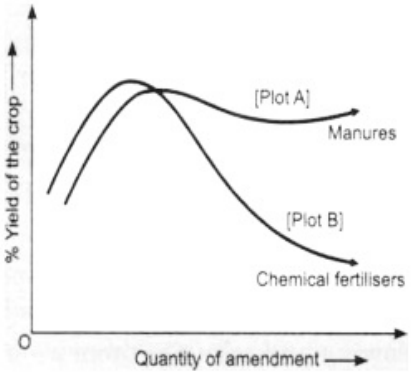
1. _____ is a method of control of pest or weed in which one living organism is used to control other living organisms. **(1)**
   a. Chemical method
   b. Cultural method
   c. Biological control
   d. Mechanical
2. The principal cereal crop of India is _____ . **(1)**
   a. Rice
   b. Maize
   c. Sorghum
   d. Wheat
3. Who is the architect of green revolution in India? **(1)**
   a. Aryabhatta
   b. M.S. Swaminathan
   c. Jawahar Lal Nehru
   d. M.S. Ramaiah
4. Match the following with correct response. **(1)**

Column A	Column B
(1) Roughage	(A) Nutrient rich
(2 Concentrates	(B) DDT
(3) Biofertilizers	(C) Nostoc, Anabaena
(4) Biomagnification	(D) Fibre rich

   a. 1-D, 2-A, 3-C, 4-B
   b. 1-A, 2-C, 3-B, 4-D
   c. 1-C, 2-B, 3-D, 4-A
   d. 1-B, 2-D, 3-A, 4-C
5. Which one of the following nutrients is not available in fertilizers? **(1)**
   a. N

b. Fe
c. K
d. P

6. What is the duration of Rabi season? **(1)**
7. What is pest? **(1)**
8. Name two good fumigants. (**1)**
9. Which one has more fat content-egg or meat? **(1)**
10. Name two types of leguminous fodder which are relished by the cattle. **(1)**
11. List any three management practices while designing a shelter for the castle. **(3)**
12. Discuss the implications of the following statement: "It is interesting to note that poultry is India's most efficient converter of low fibre foodstuff (which is unfit for human consumption) into highly nutritious animal protein food." **(3)**
13. What is genetic manipulation? How is it useful in agricultural practices? **(3)**
14. Figure shows the two crop Heads [plots A and B] have been treated by manures and chemical fertilisers respectively, keeping the environmental factors same. Observe the graph and answer the following questions.
    i. Why does plot B show sudden increase and then gradual decrease in yield?
    ii. Why is the highest peak in plot A graph slightly delayed?
    iii. What is the reason for the different pattern of the two graphs? **(5)**



15. What are the advantages of intercropping and crop rotation? **(5)**

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Answers

1. c. Biological control

   Explanation: Biological control is a method of control of pest or weed in which one living organism is used to control other living organisms. A biological weed control regiment can consist of biological control agents, bioherbicides, use of grazing animals, and protection of natural predators. Bioagent like insects, pathogen etc., and other animals are used to control weeds. Insect and pathogens infest weeds and they either reduce growth or kill weeds. Biological control method can reduce weeds but it is not possible to eradicate weeds.

2. a. Rice

   Explanation: Rice is one of the chief grains of India. India has the largest area under rice cultivation, as it is one of the principal food crops.

3. b. M.S. Swaminathan

   Explanation: The Green Revolution in India was a period when agriculture in India increased due to improved method & technology.
   Swaminathan is known as "Indian Father of Green Revolution" for his leadership and success in introducing and further developing high-yielding varieties of wheat in India. He is the founder and chairman of the MS Swaminathan Research Foundation.

4. a. 1-D, 2-A, 3-C, 4-B

   Explanation:

   i. The flesh of fruits and vegetables (no skin) is soluble, as are oats and beans. Insoluble fiber is “roughage.” It's what keeps our digestive system moving. It's found in the skin of fruits and vegetables, and in whole wheat and nuts

   ii. A major logic behind the superiority of concentrated foods is the multitude of nutrients found in natural food compared to man made nutrients. Natural foods provide hundreds and thousands of nutrients as opposed to relatively few nutrients in micro-nutrient type supplements. Also, macro nutrient supplements solve the issues of nutrient balance

iii. Anabaena- **Nostoc** fixes atmospheric nitrogen into ammonia, which may then be used or converted to a form suitable for plant growth. Thus demonstrating **Nostoc's** potential as a sustainable **biofertilizer**.

iv. The concentration effect occurs because DDT is metabolized and excreted much more slowly than the nutrients that are passed from one trophic level to the next. So DDT accumulates in the bodies (especially in fat). Thus most of the DDT ingested as part of gross production is still present in the net production that remains at that trophic level. This is why the hazard of DDT to nontarget animals is particularly acute for those species living at the top of food chains.

5. b. Fe

   Explanation: Fertilizers contain nitrogen, phosphorous and potassium but iron (Fe) is not present in fertilizers.

6. From the month of November to April.
7. Organism which damages cultivated plants or plant products or make them unfit for human consumption is known as pest.
8. Ethylene dibromide and alumunium phosphide.
9. Egg (12 per cent).
10. Barseem and lucerne (also known as king of fodder crops).
11. While designing a shelter for cattle we must have a shelter that is:
    i. Well ventilated
    ii. Protects animals from rain, heat and cold
    iii. The floor of the castle shed needs to be sloping so as to stay dry and facilitate cleaning.
12. The feed consumed by poultry birds is fibrous and cheap. Moreover, it is formulated using agricultural by-product. In this way, the product not used by human population are converted into chicken meat and the eggs produced by poultry birds, which are highly nutritious and are used by humans.
13. Plant breeding or hybridisation method which involves crossing two different plant varieties to obtain a new and better variety is called genetic manipulation.
    In agricultural practices to reduce the application of insecticides and fungicides or even fertilizers such varieties are being prepared that are:
    - high yielding

- pest resistant
- resistant to environmental stress
- don’t need fertilizers for good growth

  All these features help not only to improve quality and quantity of products but also reduces chances of environmental pollution.

14. In case of plot B the chemical fertilisers may cause various problems when used continuously for long time. Loss of microbial activity reduces decomposition of organic matter and as a result, soil fertility is lost that affects the yield.
    i. With the addition of chemical fertilisers there is sudden increase in yield due to release of nutrients N,P,K, etc. in high quantity. The gradual decline in the graph may be due to continuous use and high quantity of chemicals which kills microbes useful for replenishing the organic matter in the soil. This decreases the soil fertility.
    ii. Manures supply small quantities of nutrients to the soil slowly as it contains large amounts of organic matter [Hint: Importance of organic matter can be included]. It enriches soil with nutrients; thereby increasing soil fertility continuously.
    iii. The differences in the two graphs indicate that use of manure is beneficial for long duration in cropping as the yield tends to remain high when the quantity of manure increases.
15. Advantages of using intercropping are as follows:
    - It helps to maintain soil fertility.
    - It increases productivity per unit area.
    - It saves labour and time.
    - Both crops can be easily harvested and processed separately.

    Advantages of using crop rotation are as follows:
    - It improves the soil fertility.
    - It avoids depletion of a particular nutrient from the soil
    - It minimizes pest infestation and diseases.
    - It helps in weed control.
    - It prevents change in the chemical nature of the soil.