CBSE Test Paper 01
Chapter 15 Improvement in Food Resources

1. Interspecific is **(1)**

   a. Cross - breeding between different genera.
   b. Cross - breeding between two different varieties.
   c. Cross - breeding between two different species of the same genus.
   d. None of these

2. Who is known as the father of white revolution in India? **(1)**

   a. Dr. V. Kurien
   b. Prof. M.S Swaminathan
   c. Shri Jai PrakashNarain
   d. Mrs. Indira Gandhi

3. An exotic breed of poultry bird having high egg laying capacity is **(1)**

   a. New Hampshire
   b. White Leghorn
   c. White Cornish
   d. Broilers

4. Root nodules of leguminous Plants contain- **(1)**

   a. Mycorrhiza
   b. Azolla
   c. Rhizobium
   d. Anabaena

5. Mycorrhiza is a symbiotic association of **(1)**

   a. Algae and roots of higher plant
   b. Fungi and roots of higher plant
   c. Fungi and algae

d. None of these

6. Define selection. **(1)**

7. Name the three most important mineral elements required for plant growth. **(1)**

8. Name one oil yielding plant. **(1)**

9. Name one exotic breed of cattle **(1)**

10. Name two exotic breeds of hen which have successfully acclimatised in India. **(1)**

11. What are pathogens? Name any two plant diseases caused by pathogens? **(3)**

12. Why are preventive and biological control methods preferred for protecting crops? **(3)**

13. Which of the following conditions will give the most benefits? Why?

a. Farmers use high-quality seeds, do not adopt irrigation or use fertilisers.
b. Farmers use ordinary seeds, adopt irrigation and use fertilisers.
c. Farmers use quality seeds, adopt irrigation and use fertilisers and crop protection measures. **(3)**

14. Describe composite fish culture system. What is the major problem in fish farming? How is it overcome? **(5)**

15. What are the symptoms of diseased animals? **(5)**

CBSE Test Paper 01
Chapter 15 Improvement in Food Resources

Answers

1. c. Cross - breeding between two different species of the same genus.

   Explanation: The cross breeding between two different species of the same genus is called interspecific hybridization. Interspecific hybrids are bred by mating individuals from two species, normally from within the same genus. The offspring display traits and characteristics of both parents, but are often sterile, preventing gene flow between the species. Sterility is often attributed to the different number of chromosomes between the two species. For example, donkeys have 62 chromosomes, horses have 64 chromosomes, and mules have 63 chromosomes. interspecific hybrids cannot produce viable gametes, because differences in chromosome structure prevent appropriate pairing and segregation during meiosis, meiosis is disrupted, and viable sperm and eggs are not formed. A variety of mechanisms limit the success of hybridization, including the large genetic difference between most species. Barriers include morphological differences, differing times of fertility, mating behaviors and cues, and physiological rejection of sperm cells or the developing embryo. Some act before fertilization; others after it.In plants, some barriers to hybridization include blooming period differences, different pollinator vectors, inhibition of pollen tube growth, somatoplastic sterility, cytoplasmic-genic male sterility and structural differences of the chromosomes

2. a. Dr. V. Kurien

   Explanation: Dr. V.Kurien is known as the father of white revolution in India. White revolution increased the milk production in India many times by use of new breeds of cows and Buffalo.

3. b. White Leghorn

   Explanation: The White Leghorn is a breed of chicken originating in Tuscany, in central Italy.

   Leghorns are good layers of white eggs, laying an average of 280 per year and sometimes reaching 300-320. The eggs are white and weigh a minimum of 55 g.

4. c. Rhizobium

   Explanation: Root nodules of leguminous plants contain Rhizobium bacteria that convert atmospheric nitrogen into nitrite and nitrate to increase fertility of soil.

5. b. Fungi and roots of higher plant

   Explanation: Mycorrhiza is a symbiotic association of Fungi and roots of higher plant.

   Fungi helps in increasing absorption of water and other nutrients and angiosperm plants provide foods to fungi.

6. The sorting out of best individual plants or groups of plants from mixed population is known as selection.
7. Nitrogen, Phosphorus and Potassium.
8. Sunflower
9. Brown Swiss
10. White Leghorn and Rhode Island Red.
11. The disease causing microorganisms like bacteria, fungi and viruses are called pathogens.

    They reach the plants through water, air, soil as well as seeds.

    Two plant diseases caused by pathogens are rust in wheat and blast in paddy/stem rot in pigeon pea.
12. Prevention is better than cure so is true for plants also. Such preventions involve spraying of herbicides, weedicides, insecticides, pesticides, fungicides etc in the crop field.

    Since their excessive use can harm the crop plants and cause pollution so proper seed bed preparation, timely sowing of crops, intercropping and crop rotation are additionally applicable. Other than these biological control methods like use of resistant varieties is highly useful.

13. Conditions given in (c) will give the most benefits because:
    a. Farmer will benefit by using quality seeds.
    b. Proper irrigation will overcome drought or flood situations.
    c. Fertilisers will provide nutrients and there will be higher yield.

    For most benefits, every aspect of agriculture should be taken care of.
14. By adopting composite fish culture systems, intensive fish farming can be done. Both local and imported fish species are used in such systems. In such a system, a combination of five or six fish species is used in a single fish pond. These species are selected in such a way that they have different types of food habits and don't compete for food among themselves. As a result, the food is available in all the parts of the pond is used.

    For example, Catlas are surface feeders, Rohus feed in the middle-zoned the pond, Mrigals and Common Carps are bottom feeders, and Grass Carp feed on the weeds. Together these species can use all the food in the pad without competing with each other. This naturally increases the fish species in the pond.

    One problem with such a composite fish culture is that many of these fishes breed only during monsoon. Even if fish seed is collected from the wild, it can be mixed with that of other species as well. So a major problem in & farming is the lack of availability of good quality seed. To overcome this problem, a few ways have been worked out to breed these fish in the pond using hormonal stimulation. This has ensured the supply of pure fish seeds with desired quantities.
15. Symptoms of diseased animals are –
    a. The animal stops eating and becomes lethargic, looks tired and remains isolated.
    b. The animal shivers with high body temperature
    c. The animal shows the excessive formation of saliva which sometimes hangs from the mouth.
    d. The animal passes loose dung and colored urine.
    e. The lips and ears of the animal droop
    f. Milk-yield, egg laying capacity or working capacity of the animals is reduced.