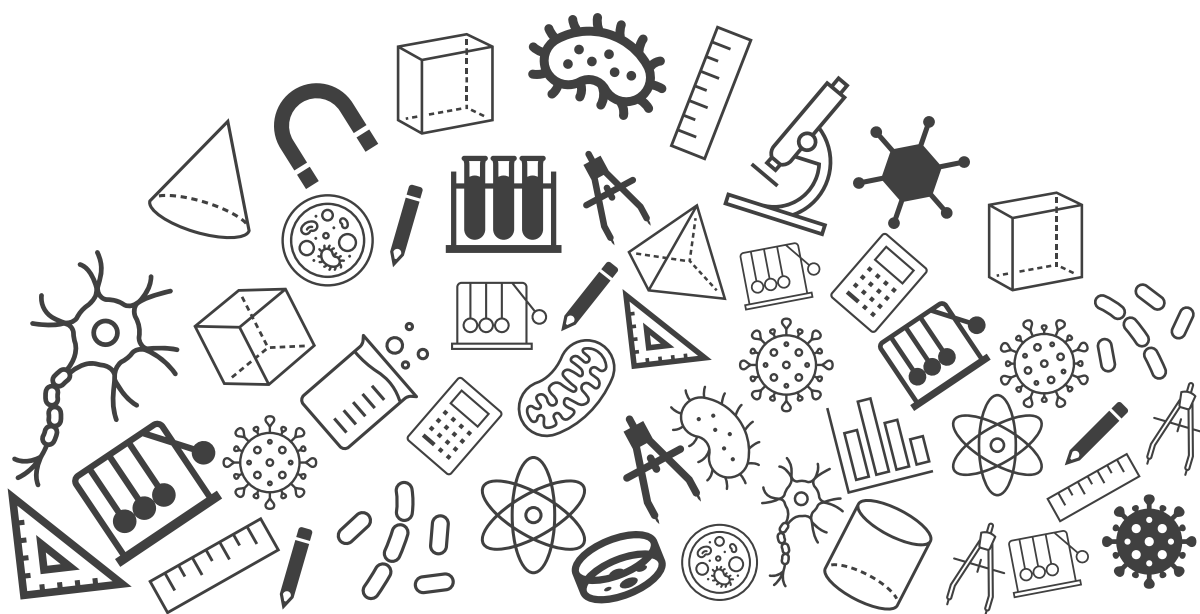


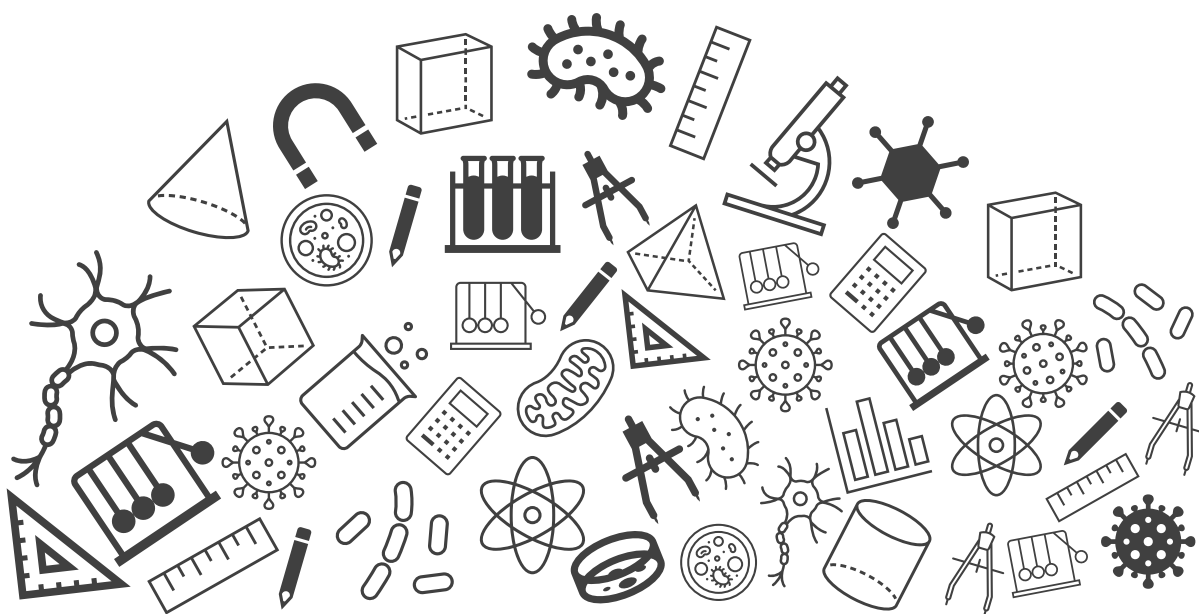


Grade 09





Improvement in Food Resources



Improvement in Food Resources

1. Uniform maturity makes the harvesting process easy. Explain this statement.

[2 Marks]

Uniform maturity of the crops makes the harvesting process easy because it helps the farmers to harvest the whole farm together, as a result of this farmer doesn't have to waste fuel more than once and immature crop wastage decreases.

[2 Marks]

2. Mention the important objectives of crop variety improvement. [3 Marks]

The major objectives of crop variety improvement are as follows:

1. Increasing the yield of plant products
2. Improving the quality of food crops
3. Producing varieties resistant to biotic and abiotic stress
4. Changing the duration of maturity
5. Wide range of adaptability
6. Imparting desirable agronomic characteristics

[0.5 x 6 = 3 Marks]

3. Why dwarfness is required as an agronomic character in cereal crops? [1 Mark]

The cereal crops are preferred to be dwarf so that they require a lesser amount of nutrients and water to grow.

[1 Mark]

4. What is intercropping and crop rotation?

[3 Marks]

Intercropping can be defined as growing of two or more crops with different nutrient requirements, simultaneously on the same field in a definite pattern.

[1.5 Marks]

Crop rotation is a system of growing different kinds of crops in recurrent succession on the same land.

[1.5 Marks]

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5. Person X and Y were successful in growing 1 kg of wheat grains and stored it in the storage room. After a while, person X noticed the decolouration of the grains and complains to person Y about it who then explains the reason for this.

Which of the reasons was explained by the person Y for decolouration of grains in storage room? [2 Marks]

Storage losses is a very common problem faced in agricultural produce. A number of biotic and abiotic factors are responsible for it. Decolouration of the grains is due to the inappropriate temperature, the moisture of the place and presence of insects in the storage room. [2 Marks]

6. Define macronutrients with examples. [2 Marks]

Macronutrients are those nutrients which are required by the crops in large amount.

[1 Mark]

There are 6 micronutrients which are essential for the plants:

1. Nitrogen
2. Potassium
3. Sulfur
4. Phosphorus
5. Magnesium
6. Calcium

[1 Mark]

7. What are the different ways an insect can affect a plant? [3 Marks]

Generally, insect pests attack the plants in three ways:

- (i) They cut the root, stem and leaf. [1 Mark]
- (ii) They suck the cell sap from various parts of the plant. [1 Mark]
- (iii) They bore into stem and fruits.[1 Mark]

Thus, they affect the health of the crop and reduce yields.

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8. Growth of the crops are dependent upon photoperiod. Justify this statement.

[3 Marks]

Photoperiod refers to the time till which sunlight is present and received by an organism.

[1 Mark]

Plants need sunlight to perform photosynthesis for their food and growth. Irregular photoperiod will affect the growth of crops. Hence, we can say that the growth of crops is dependent upon photoperiod.

[2 Marks]

9. What is rainwater harvesting? [1 Mark]

Collecting rainwater for future use by storing it in storage reservoirs is called rainwater harvesting.

[1 Mark]

10. Write a note on broiler chickens. [3 Marks]

- Broilers: These are known to be meat-producing poultry birds.[1 Mark]
- Broiler chickens are fed with vitamin-rich supplementary feed for good growth rate and better feed efficiency.
- Care is taken to avoid mortality and to maintain feathering and carcass quality. [2 Marks]

11. Why should preventive measures and biological control methods be preferred for protecting crops? [2 Marks]

- Preventive measures and biological control methods should be preferred for protecting crops because excessive use of chemicals leads to environmental problems.[1 Mark]
- Preventive measures and biological control methods are considered eco-friendly methods of crop protection.[1 Mark]

Improvement in Food Resources

12. Who defined food security as 'the physical, economic, and social access to a balanced diet, safe drinking water, environmental hygiene, primary healthcare, and primary education'? [1 Mark]

Dr M. S. Swaminathan, the father of India's Green Revolution, introduced high yielding variety seeds in India. He defined food security as the physical, economic, and social access to a balanced diet, safe drinking water, environmental hygiene, primary healthcare, and primary education. [1 Mark]

13. Differentiate between marine and inland fisheries. [2 Marks]

Marine fisheries	Inland fisheries
Rearing of marine fishes.	Rearing of freshwater fishes.
Few examples of marine fishes are Bombay duck, Pomfret, Hilsa, Eel, Salmon, and Sardine.	Few examples of freshwater fishes are Rohu, Magur, Catla, and Singhara.

[1 x 2 Marks]

14. Explain why bee-hives are setup on the farms for some of our crop-species? Name any two such crop species. [2 Marks]

Keeping beehives in crop fields during flowering period increases pollination efficiency and improves the yield-beneficial both from the point of view of crop yield and honey yield. [1 Mark]

Eg., Sunflower, Brassica, Apple and Pear. [1 Mark]

15. Define apiculture. Give one example each for indigenous and exotic varieties of honey bee. (2 marks)

Apiculture is the rearing of honey bees for obtaining products like honey, beeswax, etc. (1 mark)

a) Indigenous varieties: *Apis indica* (Indian bee) (0.5 marks)

b) Exotic varieties: *Apis mellifera* (Italian bee) (0.5 marks)