

1. Explain in brief the role of animal husbandry in human welfare.

Ans. Animal husbandry deals with the caring, feeding and management of domesticated animals. It includes poultry, farming and fisheries. These animals are very useful for human beings because

- ❖ They provide products which are used as food like meat, milk, eggs, honey, etc.
- ❖ There are some other substances obtained from animals which are beneficial to human beings like wool, silk, leather, bees wax, etc.

2. If your family owned a dairy farm, what measures would you undertake to improve the quality and quantity of milk production?

Ans.

- ❖ Proper feeding of the cattle with good quality of food.
- ❖ Clean and hygienic environment for cattles.
- ❖ Proper medication.
- ❖ Veterinary supervision.
- ❖ Selection of good breeds having high-yielding capacity.

3. What is meant by the term 'breed'? What are the objectives of animal breeding?

Ans. A group of animals which are related by descent to each other and possess similar characteristics like appearance, size, features, etc. are said to belong to a breed. The purpose of animal breeding is to produce animals with increased yield, faster growth, improved reproductive rate.

4. Name the methods employed in animal breeding. According to you, which of the methods is best? Why?

Ans. Methods employed in animal breeding are:

- ❖ Inbreeding
- ❖ Out-breeding
- ❖ Cross-breeding
- ❖ Interspecific hybridisation
- ❖ Artificial insemination
- ❖ Multiple ovulation embryo transfer

Cross breeding is the best method as it results in the development of superior traits of both the breeds and the progeny produced are fertile and there is no inbreeding depression.

5. What is apiculture? How is it important in our lives?

Ans. Apiculture is the rearing and breeding of honeybees.

It is important in our life as honeybees provide honey which is a highly nutritive substance, beeswax is used in many industries. Honeybees also pollinate flowers of some very important plants like sunflower, apple, pear.

6. Discuss the role of fishery in enhancement of food production.

Ans. Fishery is the rearing, breeding, catching and marketing of fishes and other aquatic animals.

- ❖ Fishes are important food for a large portion of human population.
- ❖ Meat of fishes is a rich source of proteins and other useful substances like poly unsaturated fatty acids (PUFA).
- ❖ The meat of other aquatic animals like prawn, crab is also consumed as food by human beings.

7. Briefly describe various steps involved in plant breeding.

Ans. Germplasm collection



Selection of parent plants



Hybridisation between the plants with superior traits



Selection of plants with superior traits among the progeny



Self-pollination of these plants



Homozygosity



Release of new crop

8. Explain what is meant by biofortification.

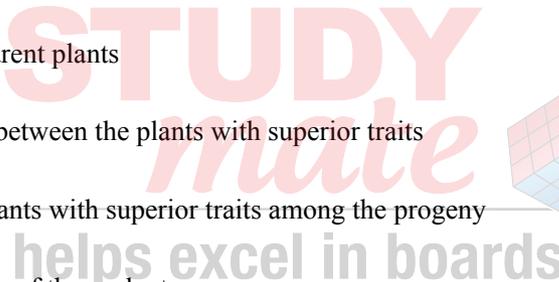
Ans. Enhancement of nutritional quality of a crop by improving the content and quality of protein, fats, vitamins, minerals and micro-nutrient. It helps to improve public health.

9. Which part of the plant is best suited for making virus-free plants and why?

Ans. Shoot apex, because it is made up of meristem which is virus-free.

10. What is the major advantage of producing plants by micro-propagation?

Ans. Faster method of producing a large number of plants.



11. Find out what the various components of the medium used for propagation of an explant *in vitro* are?

- Ans.**
- ❖ Sucrose (source of energy and carbon)
 - ❖ Inorganic salts
 - ❖ Vitamins
 - ❖ Growth regulators (auxins and cytokinins)

12. Name any five hybrid varieties of crop plants which have been developed in India.

- Ans.**
- | | |
|--------------|-----------------|
| Sonalika | (wheat) |
| Himgiri | (wheat) |
| Pusa Swarnim | (mustard) |
| Pusa Sem 2 | (bean) |
| Pusa Sawani | (Lady's finger) |

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