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S – 6852

Reg. No. :

Name :

Third Semester M.Sc. Degree Examination, February 2024

Botany

BO 231 : PLANT BREEDING, HORTICULTURE AND BIostatISTICS

(2019 Admission onwards)

Time : 3 Hours

Max. Marks : 75

I. Answer the following questions.

1. What is atomic gardening?
2. Name the cardamom research institute in Kerala.
3. Explain advantages of distant hybridisation.
4. Describe plant variety rights.
5. Write short notes on arboriculture.
6. What is vermicomposting?
7. Give short notes on cut flower industry.
8. What is ANOVA?
9. Describe the properties of binomial distribution.
10. Explain the use of LSD.

(10 × 1 = 10 Marks)

P.T.O.



II. Answer the following questions in not more than **50** words.

11. (a) What do you mean by genetic modification techniques?

OR

(b) What is center of diversity of a species?

12. (a) Compare auto and allopolyploidy.

OR

(b) What are requirements of back cross breeding?

13. (a) Describe ideotype breeding and its significance.

OR

(b) What is the role of seed certification?

14. (a) Give a short account on synthetic fertilisers.

OR

(b) What are Bonsai?

15. (a) Why mean is considered to be the best measure of central tendency?

OR

(b) How do you calculate the standard deviation?

(5 × 2 = 10 Marks)

III. Answer the following questions in not more than **150** words.

16. (a) Describe the advantages and disadvantages of mutation breeding.

OR

(b) Compare the pedigree and bulk methods of hybridization of self-fertilized crops.

17. (a) Explain the breeding procedure used for the development of disease resistant varieties.

OR

(b) Compare an interspecific and intergeneric hybrids.



18. (a) Distinguish between inbreeding and inbreeding depression.

OR

(b) Give an account on genetic male sterility in crop plants.

19. (a) Give an account of plant growth structures and its uses.

OR

(b) Describe various types of gardens and their uses.

20. (a) Distinguish between hand tools and power tools used in gardening.

OR

(b) What are cultural practices in horticulture? Explain the various pre-planting operations.

21. (a) Compare Bernoulli distribution and Poisson probability distribution.

OR

(b) Explain the various tests of significance used in biological experiments.

22. (a) Give an account on correlation and regression analyses. Add notes on their coefficients.

OR

(b) Give an account of various types of randomized block designs used in science.

(7 × 5 = 35 Marks)

IV. Answer the following questions in not more than **250** words:

23. (a) Explain various methods followed to overcome self-incompatibility in plants.

OR

(b) Give an account on the advances made in polyploidy breeding. Mention its role in crop improvement.



24. (a) Discuss on the various types of artificial methods of vegetative propagation. Give examples.

OR

- (b) Compare the various forms of diagrammatic and graphical representation of data.

(2 × 10 = 20 Marks)

