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K – 4922

Reg. No. :

Name :

Third Semester M.Sc. Degree Examination, February 2021

Botany

BO 231 : PLANT BREEDING, HORTICULTURE AND BIOSTATISTICS

(2019 Admission)

Time : 3 Hours

Max. Marks : 75

SECTION – A

I. Answer the following questions :

1. Which is the first gamma garden in India?
2. Where is the headquarters of IRRI situated?
3. What are distant hybrids?
4. Explain cytoplasmic male sterility.
5. Write short notes on shovel.
6. Describe worm farm composting.
7. What does terrarium mean?
8. What is F-test?
9. What is Line diagram?
10. Explain pictograph.

(10 × 1 = 10 Marks)

P.T.O.



SECTION – B

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

11. (a) Write short notes on gene bank.

OR

(b) What is plant breeder's rights act?

12. (a) Write short notes on seed certification practices.

OR

(b) Explain resistance breeding.

13. (a) Describe some of the chemical and physical mutagens.

OR

(b) Compare autopolyploidy and allopolyploidy.

14. (a) Give a short account on arboretum.

OR

(b) What are vertical gardens?

15. (a) Which is the best measure of central tendency? Why?

OR

(b) Differentiate between Bar diagram and Histogram.

(5 × 2 = 10 Marks)



SECTION – C

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

16. (a) Describe the various centres of diversity of crops.

OR

(b) What are interspecific and intergeneric hybridization, and their roles?

17. (a) Discuss the various types of male sterility in crop plants and their significance.

OR

(b) Give an account of vertical and horizontal resistance.

18. (a) Explain the methodology and applications of mutation breeding.

OR

(b) Describe the various methods to overcome incompatibility.

19. (a) Write notes on inbreeding. What are its consequences.

OR

(b) Discuss the various aspects of backcross breeding.

20. (a) Give an account of ideotype breeding and its achievements.

OR

(b) Describe the chromosome manipulation techniques used in plant breeding.

21. (a) Give an account of various natural and artificial methods of plant propagation.

OR

(b) Explain the different types of synthetic fertilizers and organic manures.



22. (a) Compare correlation and regression analyses. Add notes on their coefficients.

OR

- (b) Give an account of various tests of significance used in biological experiments.

(7 × 5 = 35 Marks)

SECTION – D

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

23. (a) Discuss the role of selection as a method of crop improvement. Explain its merits and demerits.

OR

- (b) Describe the procedure of hybridization. Add notes on hybridization methods employed in self-pollinated crops.

24. (a) Describe the various types and uses of gardens. Add notes on garden architecture.

OR

- (b) Compare the various measures of dispersion. What are relative measures of dispersion.

(2 × 10 = 20 Marks)

