

**B.Sc. BOTANY
FIFTH SEMESTER
PLANT BREEDING
BSB-504**

**SET
B**

[USE OMR SHEET FOR OBJECTIVE PART]

Duration: 3 hrs.

Full Marks: 70

Time: 30 mins.

(Objective)

Marks: 20

Choose the correct answer from the following:

1×20=20

1. In three way cross.....
 - a. One single cross and inbreds
 - b. Two inbreds
 - c. One parents
 - d. Four inbreds
2. Protoandry is.....
 - a. Female organ mature first
 - b. Male organ mature first
 - c. Both organ mature first
 - d. None of these
3. Inbreeding depression is observed in:
 - a. Cross pollinated
 - b. Self pollinated
 - c. Often self pollinated
 - d. Hybrid
4. Intergenic hybridization:
 - a. Same species
 - b. Different species
 - c. Same genus
 - d. Different genus
5. Pure line is a variety.....
 - a. Heterozygous
 - b. Homorozygous
 - c. Both a and b
 - d. Selection
6.is the oldest selection method for crop improvement.
 - a. Mass selection
 - b. Pureline selection
 - c. Pedigree selection
 - d. Recurrent selection
7.is an ancient method of crop improvement.
 - a. Selection
 - b. Introduction
 - c. Hybridization
 - d. Mutagenesis
8. Emasculation is a technique in which.....
 - a. Female reproductive part is removed
 - b. Male reproductive part is removed
 - c. Nothing is removed
 - d. All of the above
9. Adaptation of introduced plant is known as.....
 - a. Acclimatization
 - b. Domestication
 - c. Introduction
 - d. Adjustant
10. Mutation is.....
 - a. Sudden change
 - b. Heritable change
 - c. Non heritable change
 - d. All of these

11. The first artificial plant hybrid was made by:
 - a. Thomas Fairchild
 - b. De Vries
 - c. Borlaug
 - d. M. S. Swaminathan
12. The first man-made cereal 'Triticale' has been developed from a cross between:
 - a. Wheat and Oat
 - b. Wheat and Maize
 - c. Maize and Rice
 - d. Wheat and Rye
13. A 'trisomic' individual has:
 - a. An extra chromosome
 - b. One less chromosome
 - c. Two extra chromosome
 - d. One pair of an extra chromosome
14. The common bread wheat is:
 - a. Allotetraploid
 - b. Allohexaploid
 - c. Auto tetraploid
 - d. Diploid
15. If the male plant is diploid and the female plant is tetraploid, the endosperm will be:
 - a. Haploid
 - b. Pentaploid
 - c. Triploid
 - d. Tetraploid
16. The quickest method of plant breeding is:
 - a. Introduction
 - b. Selection
 - c. Hybridisation
 - d. Mutation Breeding
17. Who used the term heterosis for the first time?
 - a. Shull
 - b. Keith Downey
 - c. Thomas Andrew Knight
 - d. Niels Ebbesen Hansen
18. Which is true about heterosis?
 - a. Superiority of an F1 hybrid over its male parent
 - b. Superiority of an F1 hybrid over its female parent
 - c. Superiority of an F1 hybrid over both of its parent
 - d. None of the above mentioned
19. There are three parents, parent A, Mid parent, and parent B. The mean value of parent A is 10, and the mean value of F1 is also 10. What will be the phenomenon?
 - a. Complete dominance
 - b. Partial dominance
 - c. No dominance
 - d. Heterosis
20. Semi dwarf rice variety IR8 was developed in:
 - a. India
 - b. Taiwan
 - c. China
 - d. Philippines

-- --- --

(Descriptive)

Time : 2 hr. 30 mins.

Marks : 50

[Answer question no.1 & any four (4) from the rest]

- | | |
|--|--------|
| 1. What is hybridization? Write the technique of hybridization. | 2+8=10 |
| 2. Discuss in detail the salient features of improvement programmes with mutation breeding in chickpea or blackgram. | 10 |
| 3. List the various sources of disease resistance. Discuss them in detail with the help of suitable examples. | 10 |
| 4. Write the difference between mass and pureline selection. | 10 |
| 5. Write the procedure for hybrid variety production in cross pollinated crops. | 10 |
| 6. Define autoploidy. Briefly describe the methods of production of autoploids and their importance and limitations in crop improvement. | 2+8=10 |
| 7. What is seed test? Briefly describe the various seed test required for seed certification. | 2+8=10 |
| 8. Describe the green revolution in India with reference to wheat. | 10 |

== *** ==