

Exam. Code : 210003

Subject Code : 4805

M.Sc. Botany 3rd Semester
PLANT BREEDING AND IPR
Paper—BOT-C614

Time Allowed—3 Hours] [Maximum Marks—50

Note :— Attempt **five** questions in all, selecting at least **one** question from each Section. The **fifth** question may be attempted from any Section. Draw neat labelled diagrams in support of your answer.

SECTION—A

1. Define :
 - (a) Primary and Secondary centre of diversity
 - (b) Domestication
 - (c) Apomixis
 - (d) Self Incompatibility. 2.5×4=10

2. What is male sterility ? List the various types of male sterility found in the plants. Explain the inheritance of cytoplasmic-genetic male sterility with the help of suitable diagrams and examples. 10

SECTION—B

3. Write notes on :
- (a) Inbreeding depression
 - (b) Interspecific hybridization
 - (c) Heterosis
 - (d) Hybrid vigour
 - (e) Gene cloning. 2×5=10
4. What is mass selection ? Explain procedure, merits and demerits. Also describe its applications in plant breeding. 10

SECTION—C

5. Explain the methods and advantages of breeding to develop disease resistant varieties of plants. 10
6. Explain :
- (a) Correlation coefficient
 - (b) Heritability. 5×2=10

SECTION—D

7. Define polyploidy and aneuploidy and describe their role in crop improvement. 10
8. What are IPRs ? Briefly explain the various forms of intellectual property and discuss its merits and demerits. 10