

C078

Total Pages : 3

Roll No.

MSCBOT-507

Cytogenetic and Plant Breeding

M.Sc. BOTANY (MSCBOT)

2nd Semester Examination, 2022 (June)

Time : 2 Hours]

Max. Marks : 80

Note : This paper is of Eighty (80) marks divided into two (02) Sections A and B. Attempt the questions contained in these sections according to the detailed instructions given therein.

SECTION-A

(Long Answer Type Questions)

Note : Section 'A' contains Five (05) long answer type questions of Twenty (20) marks each. Learners are required to answer any Two (02) questions only.

(2×20=40)

1. What do you understand by genetic action? Explain the various factors affecting gene action.

2. What do you understand by mutation? Discuss its types in detail.
3. Discuss the various methods of plant breeding.
4. How is sex determination done in dioecious organisms? What is its significance?
5. What is Mendelian inheritance and non-Mendelian inheritance? Discuss both in detail.

SECTION-B

(Short Answer Type Questions)

Note : Section 'B' contains Eight (08) short answer type questions of Ten (10) marks each. Learners are required to answer any Four (04) questions only. (4×10=40)

1. Explain the role of genetic variance in plant breeding.
2. Write a brief note on autopolyploidy.
3. Write the applications of apomixis in plant breeding.
4. Discuss the breeding strategies for salt and acid tolerance in plants.
5. What are X-linked genes? Explain it with suitable example.

6. Write a short note on poky strain of *Neurospora*.
 7. Compare the genetic male sterility, cytoplasmic male sterility and cytoplasmic genetic male sterility.
 8. Write a short note on crossing over.
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