

C072

Total Pages : 3

Roll No.

MBOT-604

Plant Molecular Biology

M.Sc. BOTANY (MSCBOT)

3rd Semester Examination, 2022 (June)

Time : 2 Hours]

Max. Marks : 40

Note : This paper is of Forty (40) 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 Ten (10) marks each. Learners are required to answer any Two (02) questions only.

(2×10=20)

1. Define and describe the Polymerase Chain Reaction (PCR).
2. What is marker? Write a brief account on morphological, biochemical and DNA markers.

3. What is genome? Explain genome organization in higher plants.
4. Describe mitochondrial genome organization and its role in cytoplasmic male sterility.
5. What are restriction endonucleases and write their significance in molecular biology.

SECTION-B

(Short Answer Type Questions)

Note : Section 'B' contains Eight (08) short answer type questions of Five (05) marks each. Learners are required to answer any Four (04) questions only. (4×5=20)

1. Write a short note on applications of molecular markers.
2. Write a short note on any *two* :
 - (a) Repetitive DNA.
 - (b) Properties of ideal DNA marker.
 - (c) RAPD.
3. Explain about scope of Fungal Biotechnology.
4. Describe the following :
 - (a) Type II and Type III restriction endonuclease
 - (b) Eukaryotic translation

5. Discuss the C-value paradox.
 6. Define repetitive and non-repetitive DNA.
 7. Write a brief account on eukaryotic transcription.
 8. Explain the following :
 - (a) Chromosome structure and organization.
 - (b) Define genome packaging.
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