

Sr. No. 2403

Exam Code: 210003

Subject Code: 3792

M.Sc. Botany-3rd Sem.

(2118)

Paper: BOT-C613

Plant Molecular Biology

Time allowed: 3 hrs.

Max. Marks: 50

- Note:** Candidates are required to attempt all Sections (A, B and C)
- Section-A:** Attempt all parts, each having 1 mark.
- Section-B:** Attempt any seven questions. Answer to any question should not exceed 2 pages. Each question carries 3 marks.
- Section-C:** Attempt any three questions. Answer to any question should not exceed 4 pages. Draw diagram wherever applicable. Each question carries 7 marks.

**Section-A**

1. Discuss in brief (2-4 lines each). (1x8=8)
- i) Transcriptional unit
  - ii) Ribonucleoproteins
  - iii) rDNA
  - iv) Western Blotting
  - v) Cosmid
  - vi) Lysogeny
  - vii) RAPD
  - viii) Artificial Chromosomes

**Section-B**

2. Write short notes on any seven of the following (3 marks each) (3x7=21)
- i) DNA sequencing

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- ii) Introns and Exons
- iii) Host cell restriction
- iv) Gene cloning
- v) Nomenclature of restriction endonucleases
- vi) Vectors for cloning single stranded DNA
- vii) pBR322
- viii) Ti plasmid
- ix) Transgenic plants
- x) Bioinformatics

3. Attempt any three of the following: (7 marks each) (7×3=21)

- i) Give an account of RNA processing. Support your answer with suitable diagrams.
- ii) What do you understand by genomic library ? Give diff. steps for creation of genomic library of human beings.
- iii) Give an account of use of plasmids in gene cloning.
- iv) With the help of suitable diagram, give an account of PCR.
- v) Give a detailed account of Microarrays.

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