

## M.Sc Sem-3 Examination

503

Botany

Time : 2-30 Hours]

November-2024

[Max. Marks : 70

Instructions: All Questions carry equal marks

Attempt all Questions

Q I Describe role of Plant Growth regulators in Plant Tissue Culture 14

OR

Q I A. Short note on Synthetic Seeds 7

B. Explain Gynogenesis 7

Q II Describe Gene construct and its advantages 14

OR

Q II A. Short note on Bioreactors 7

B. Describe the role of gene construct in Plant Improvement 7

QIII Describe Industrial applications of primary metabolites 14

OR

Q III A. Short note on Berberine 7

B. Short note on immunologically active polysaccharides from plants 7

Q IV Describe RFLP as molecular marker along with its advantages and disadvantages 14

Q IV A. Types of in-vitro pollination along with diagrams 7

B. Describe Oligonucleotide Directed Mutagenesis 7

Q V Attempt any 7 out of 12 MCQs/Short question (One- or Two-line answer)/ Fill in the blanks/True or False etc. 14

1 Give example of virus free culture 2

2 Name different sterilization methods used in Plant Tissue Culture 2

3 Hybrids are made up of what? 2

4 What is Transgenic Plant? 2

5 Give names of chemicals used for Protoplast culture 2

6 Give two applications of DNA fingerprinting 2

7 Define Artificial seeds 2

8 Give full forms of RdDM and ODM 2

9 What is SDN and what is its function in New Plant Breeding Techniques? 2

10 Define Primary metabolites 2

11 Give two drawbacks of Conventional Breeding methods 2

12 Name two cryoprotectants 2