M 26056

Reg. No. : .....

Name : .....

Third Semester M.A./M.Sc./M.Com. Degree (Reg./Sup./Imp.) Examination, November 2014

BOTANY

B-VII : Plant Tissue Culture, Biotechnology, Bioinformatics and Biometrics

Time : 3 Hours Max. Marks : 80

Instruction: *Draw diagrams* ***wherever*** *necessary.*

I. Answer **any two** of the following : **(2×10=20)**

1) Give an account on in-vitro plantlet regeneration via somatic embryogenesis. Add a note on its significance.

2) What are the major bioinformatics resources used in biology ? Briefly explain their role in structure and sequence comparison.

3) Explain the steps involved in the construction of cDNA libraries. Add a note on its applications.

4) Give an account on different types of reactors used in cell suspension culture. Add a note on the significance.

II. Answer **any one** of the following : **(1×10=10)**

5) Give an account on the factors involved in organogenesis.

6) Explain different techniques employed in somatic hybridization.

III. Answer **any four** of the following : **(4×5=20)**

7) Give an account on sampling theory and methods.

8) Write a note on golden rice.

9) Explain the stages involved in micropropagation.

10) Give an account on cryopreservation.

11) Explain pollen culture.

12) Briefly explain the laboratory organisation for plant tissue culture.

P.T.O.

IV. Answer **any six** of the following : **(6×3=18)**

13) Meristemoid
14) Somaclones
15) Sodium alginate
16) Endosperm culture
17) Electroporation
18) Sequence database
19) Median
20) Agar.

V. Write short notes on **any six** of the following : **(6×2=12)**

21) Binomial distribution
22) Edible vaccine
23) Cosmid
24) Meso inositol
25) *Agrobacterium rhizogenes*
26) Habituation
27) Flar Savr
28) ANOVA.
