

Code No. : 5735

Sub. Code : LBT2

M.PHIL. DEGREE EXAMINATION, NOVEMBER 2008

First Semester

BOTANY

Paper II

PLANT BIOTECHNOLOGY

(For those who joined in July 2007 onwards)

Time : Three hours

Maximum : 100 marks

Section - A

Answer ALL questions

(10 x 2 = 20 Marks)

Write short notes on:

1. Phagemid
2. Gene Library
3. Molecular farming
4. Transgenic plants
5. Germ plasm
6. Haploids
7. Proteomics
8. Functional genomics
9. POPGENE
10. Patent Right

Section – B

Answer all questions choosing either (a) or (b) (5 x 6 = 30 marks)

11. (a) Explain the gene transfer methods.

(or)

(b) Write a short note on gene sequencing.

12. (a) Explain the mechanism of t-DNA transfer.

(or)

(b) Explain gene silencing with an example.

13. (a) Explain the method of biotransformation.

(or)

(b) How cryopreservation is useful in tissue culture studies?

14. (a) Explain gene mapping in prokaryotes.

(or)

(b) Define molecular marker in detail.

15. (a) Define PBR in detail.

(or)

(b) Explain tools of Bioinformatics.

Section – C

Answer all questions choosing either (a) or (b) (5 x 10 = 50 Marks)

16. (a) Write on the types and role of marker genes.

(or)

(b) Write notes on:

(i) Shuttles vector

(ii) Target genes

17. (a) Explain the structure and organization of Ti plasmid.

(or)

(b) Explain how tissue culture technique is useful in overcoming the stress and pest problem in plants.

18. (a) Write an essay on micro propagation.

(or)

(b) Explain the method of invitro production of secondary metabolites.

19. (a) Write an essay on Genomics.

(or)

(b) Write notes on

(i) Human gene

(ii) Pattern of gene expression

20. (a) Write an essay on Plant Genomic Resources and its importance.

(or)

(b) Write notes on:

(i) Sequence database searching

(ii) Phylogenetic analysis