



K16P 0395

Reg. No. :

Name :

Second Semester M.Sc. Degree (Reg./Supple./Improve.)

Examination, March 2016

BOTANY

BOT 2C 07 : Genetics, Evolution and Biometrics

(2014 Admn. Onwards)

Time : 3 Hours

Max. Marks : 60

Instruction : Draw diagrams wherever necessary.

I. Answer **any two** of the following :

(2×8=16)

1) How the linkage mapping in human pedigree analysis can be used ? Explain.

OR

2) Explain the phenomenon of homologous and nonhomologous DNA recombination.

3) Write a detailed account of the molecular theory of evolution.

OR

4) Explain the probability theories with examples.

II. Answer **any two** of the following :

(2×6=12)

5) Explain the process of protein synthesis in an eukaryotic cell.

6) Write an account of neutral evolution.

7) Explain the completely randomized block design and its applications.

P.T.O.



III. Answer **any six** of the following :

(6×3=18)

- 8) Write an account of enzymes involved in DNA replication.
- 9) Explain gene mapping.
- 10) Discuss one gene-one enzyme concept.
- 11) Briefly explain the regulation of expression of viral genes.
- 12) Write an account of the methods of mutagenicity testing.
- 13) Explain molecular clocks.
- 14) Write an account of Latin square design.
- 15) Explain Binomial distribution.

IV. Answer **any seven** of the following :

(7×2=14)

- 16) Excision repair.
 - 17) Three point test cross
 - 18) Genetic code
 - 19) mRNA mapping
 - 20) Introns
 - 21) Rh factor
 - 22) Cataclysmic evolution
 - 23) Arithmetic mean
 - 24) Variance
 - 25) Ogive.
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