K21P 0743

Reg. No. : .....

Name : .....

**II Semester M.Sc. Degree (CBSS – Reg./Suppl.(Including Mercy Chance)/Imp.) Examination, April 2021**
**(2014 Admission Onwards)**
**BOTANY**
**BOT 2C07 : Genetics, Evolution and Biometrics**

Time : 3 Hours Max. Marks : 60

***Instruction :*** *Draw drawings* ***wherever*** *necessary.*

I. Answer **any two** of the following : **(2×8=16)**

1) Explain homologous and non-homologous recombination.

OR

2) Write an account of types, causes and detection of mutation.

3) Give an account of population genetics.

OR

4) Explain the role of polyploidy in evolution.

II. Answer **any two** of the following : **(2×6=12)**

5) Explain Molecular theory of evolution.

6) Explain methods of sampling.

7) Write an account of completely randomized bloks and design.

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

8) Explain molecular tools in phylogeny.

9) Explain the factors affecting equilibrium.

10) Explain transcription factors.

11) Give an account of Operon concept.

12) Explain role of mutation in evolution.

13) Give an account of systems of mating.

14) Explain the concepts of neutral evolution.

15) Explain with suitable example application regression method.

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IV. Answer **any seven** of the following : **(7×2=14)**

16) Mean deviation.

17) Poisson distribution.

18) Germinal mutants.

19) Exon.

20) Messenger RNA.

21) Operator gene.

22) DNA polymerase.

23) Topoisomerase.

24) Aminoacyl t RNA synthetase.

25) Rh factor.

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