



K23U 0473

Reg. No. :

Name :

VI Semester B.Sc. Degree (CBCSS – OBE – Regular/Supplementary/
Improvement) Examination, April 2023
(2019 and 2020 Admissions)

CORE COURSE IN BOTANY/PLANT SCIENCE
6B13BOT/PLS : Evolution and Palaeobotany

Time : 3 Hours

Max. Marks : 40

Instruction : Draw diagrams wherever specified.

PART – A

Objective type questions. Answer **all**.

(4×1=4)

- The term 'microevolution' was coined by
 - Darwin
 - Lamarck
 - Sumner
 - Goldschmidt
- Genetic drift is
 - An orderly change in gene frequency
 - A random change in population size
 - An orderly change in population size
 - A random change in gene frequency
- Which group of plants first developed vessels ?
 - Angiosperms
 - Bryophytes
 - Pteridophytes
 - Gymnosperms
- Approximate age of earth is
 - 4.5 m.y.
 - 3.5 b.y.
 - 5000 years
 - 4.5 b.y.

PART – B

Short essay questions. Answer **any eight**.

(8×2=16)

- Compare impressions and compressions.
- Describe *Homo erectus*.

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- Define Triticale.
- Differentiate monophyly and polyphyly.
- Explain Germplasm theory.
- Enlist the differences between apes and humans.
- Explain species concept.
- Mention the impacts of crop domestication.
- Write a note on factors affecting gene frequency in a population.
- Explain how hybridization is linked to evolution.
- Describe the evolutionary changes happened during the formation of Pteridophytes.
- Mention the formation of embryo in the course of plant evolution.

PART – C

Essay questions. Answer **any four**.

(4×3=12)

- Summarize the contributions of Bribal Sahni in the field of Palaeobotany.
- Describe Hardy-Weinberg law.
- Enumerate molecular evidences for Darwinism.
- Prepare a note on Phylogenetic trees with suitable diagram.
- Explain the role of polyploidy in the process of evolution.
- Explain sympatric speciation.

PART – D

Long essay questions. Answer **any one**.

(1×8=8)

- Discuss the characteristics of *Lyginopteris* with suitable diagrams.
- Write an essay on the background and postulates of Darwin's Natural Selection theory.
- Describe how gene sequences are playing crucial role in studying the evolution of a species.