

**ASSIGNMENT BOOKLET**  
**Bachelor's Degree Programme (B.Sc.)**

**TAXONOMY AND EVOLUTION**

**Valid from 1<sup>st</sup> January, 2023 to 31<sup>st</sup> December, 2023**

**It is compulsory to submit the Assignment before filling in the  
Term-End Examination Form.**

**Please Note**

- You can take electives '56 to 64' credits from a minimum of TWO and a maximum of FOUR science disciplines, viz. Physics, Chemistry, Life Sciences and Mathematics.
- You can opt for elective courses worth a MINIMUM OF 8 CREDITS and a MAXIMUM OF 48 CREDITS from any of these four disciplines.
- At least 25% of the total credits that you register for in the elective courses from Life Sciences, Chemistry and Physics disciplines must be from the laboratory courses. For example, if you opt for a total of 64 credits of electives in these 3 disciplines, at least 16 credits 'out of those 64 credits' should be from lab courses.
- You cannot appear in the Term-End Examination of any course without registering for the course. Otherwise, your result will not be declared and the 'responsibility will be yours'.



**School of Sciences**  
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**(2023)**

We hope you are familiar with the system of evaluation to be followed for the Bachelor's Degree Programme. At this stage you may probably like to re-read the section on assignments for Elective Courses in the Programme Guide that we sent you after your enrolment. A weightage of 30 per cent, as you are aware, has been earmarked for continuous evaluation which would consist of **one tutor-marked assignment (TMA)** for this course.

### Instructions for Formatting Your Assignments

Before attempting the assignment please read the following instructions carefully.

- 1) On top of the first page of your TMA answer sheet, please write the details exactly in the following format:

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ENROLMENT NO.: .....

NAME : .....

ADDRESS .....

.....

COURSE CODE : .....

COURSE TITLE : .....

ASSIGNMENT NO.: .....

STUDY CENTRE : ..... DATE: .....

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**PLEASE FOLLOW THE ABOVE FORMAT STRICTLY TO FACILITATE EVALUATION AND TO AVOID DELAY.**

- 2) Use only foolscap size writing paper (but not of very thin variety) for writing your answers.
- 3) Leave 4 cm margin on the left, top and bottom of your answer sheet.
- 4) Your answers should be precise.
- 5) While solving problems, clearly indicate the question number along with the part being solved. Be precise.
- 6) **This assignment will remain valid for one year from January 1, 2023 to December 31, 2023.** However, you are advised to submit it within **12 weeks** of receiving this booklet to accomplish its purpose as a teaching-tool. Answer sheets received after the due date shall not be accepted.
- 7) **You cannot fill the exam form for this course until you have submitted this assignment.**

**We strongly feel that you should retain a copy of your assignment response to avoid any unforeseen situation and append, if possible, a photocopy of this booklet with your response.**

We wish you good luck!

**ASSIGNMENT**  
**(Tutor Marked Assignment)**

**Course Code: LSE-07**  
**Assignment Code: LSE-07/TMA/2023**  
**Max. Marks: 100**

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1. Differentiate between the following: (2½×4=10)
  - i) Natural and phenetic classification
  - ii) Flora and Monograph
  - iii) Primary and secondary metabolites
  - iv) Homologous and analogous organs
  
2. Discuss the main features of Bentham and Hooker system of classification. (10)  
Also list its merits and demerits.
  
3. Write notes on the following: (2½×4=10)
  - i) Taxonomic hierarchy
  - ii) Principles of Binomial Nomenclature
  - iii) Famous Botanical gardens
  - iv) Haeckel's law
  
4. Describe the various tools/evidences used in taxonomy. (10)
  
5. a) What are keys? Describe various types of keys and mention, how are they useful? (5×2=10)  
b) What are wildlife sanctuaries? Describe few famous wildlife sanctuaries of India.
  
6. What is chemotaxonomy? Describe the various chemical characters used in the studies related to taxonomy. (10)
  
7. a) Explain the concept of Genetic drift. (5×2 =10)  
b) Describe in brief Australopithecine.
  
8. What is Speciation? Discuss various kinds of speciation. (10)
  
9. a) Explain the concept of Kin and group selection. (5×2 =10)  
b) How is alpha taxonomy different from omega taxonomy?
  
10. Variations in a natural population occur because of mutations and genetic recombination. Justify the statement by providing an elaborate explanation. (10)