

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

**TAXONOMY AND EVOLUTION**

**Valid from 1<sup>st</sup> January, 2024 to 31<sup>st</sup> December, 2024**

**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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**(2024)**

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, 2024 to December 31, 2024.** 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/2024  
Max. Marks: 100

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1. Explain of the following: (2½×4=10)
  - i) Botanical garden
  - ii) Type specimen
  - iii) Systematic
  - iv) Vestigial organ
  
2. Differentiate between: (2½×4=10)
  - i) Allopatric and peripatric speciation
  - ii) *Homo habilis* and *Homo erectus*
  - iii) Homologous and analogous organs
  - iv) Alpha and Omega taxonomy
  
3. Short notes: (2½×4=10)
  - a) Type specimens
  - b) Hybrid sterility
  - c) Phenetic classification
  - d) Artificial system of classification
  
4. a) Explain the term homology and analogy with proper examples. (5)  
b) Give the full form of : (3)
  - i) ICZN
  - ii) IUBS
  - iii) ICBN
  - iv) ICNCP  
c) What are the keys? (2)
  
5. a) Differentiate between Homology and Analogy with proper examples. (5×2=10)  
b) List the principles of Binomial Nomenclature.
  
6. a) Describe why is it necessary to classify plants and animals. (5)  
b) Write the principles of taxonomy and systematics in brief. (3)  
c) What is omniscient classification? (2)

7. With the help of an example of host-parasite relationship explain the concept of Coevolution. (10)
8. Explain industrial melanism and genetic repatterning during isolation with examples. (10)
9. Make a comparison between *Homo habilis* and *Homo erectus*. (10)
10. a) Why is the defective allele for sickle cell hemoglobin (HbS) not eliminated from human population by natural selection? (5)  
b) Give the significance of Darwin's contribution towards organic evolution. (5)