LSE-07

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

TAXONOMY AND EVOLUTION

Valid from 1st January, 2021 to 31st December, 2021

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'.**

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(2021)

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:

ENROLMENT NO.: ……
NAME : ……
ADDRESS ……..
……

COURSE CODE : …….
COURSE TITLE : …….
ASSIGNMENT NO.: ……..…
STUDY CENTRE : ……..….. DATE: ……...

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, 2021 to December 31, 2021**. 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/2021
Max. Marks: 100

1 a) Describe the work done on plant taxonomy in ancient India. (5)

b) Differentiate between Artificial, Natural and Phylogenetic classification. (3)

c) Classify *Mangifera indica* starting from kingdom up to species. (2)

2 a) Discuss the importance of Binomial Nomenclature by citing different example. (5+5=10)

b) How various biochemical approaches are helpful in the process of classification of plants and animals? Give examples.

3. Why five kingdom classification system given by Whittaker is better than the three kingdom classification? Give the main characteristics of each kingdom of Whittaker's system of classification with examples. (10)

4. Answers the following briefly: (2×5=10)

i) Different types of keys for identification in a taxonomic works.

ii) Neotaxonomy and its importance

iii) Principles of Binomial Nomenclature of classification in taxonomy.

iv) Ethics of herbarium.

v) Difference between alpha and omega taxonomy.

5. Write short notes on the following: (2½×4=10)

i) Type Specimens

ii) Taxonomic hierarchy

iii) Flora

iv) Wild life Sanctuaries

6 Explain how competition between two species leads to character displacement and ecological exclusion by giving an example (10)

7. a) Briefly discuss the evolutionary thinking of pre-Darwinian period. (10)

b) With the help of an example explain how homology represents the consequences of adaptive radiation from a common ancestor.

8. a) Explain the biological species concept and describe the mechanisms of speciation. (5+5=10)

b) Explain industrial melanism and genetic repatterning during isolation with examples.

9. With the help of examples discuss the formation of coadapted communities and phenomenon of character displacement (10)

10. List the trends in human evolution. In your opinion what are the selection pressure determining the future of man? (10)