

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

**Ecology**

**Valid from 1<sup>st</sup> January 2021 to 31<sup>st</sup> 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'.



**School of Sciences**  
**Indira Gandhi National Open University**  
**Maidan Garhi, New Delhi-110068**

(2021)

Dear Student,

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, 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-02  
Assignment Code: LSE-02/TMA/2021  
Max. Marks: 100

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1. a) Define the following terms: (1×10)
  - i) Keystone species
  - ii) Biomagnification
  - iii) Field capacity
  - iv) Ecological pyramids
  - v) Niche
- b) State whether the given statements are true or false:
  - i) Hippocrates was the first person to introduce ecological approach long before the term ecology was coined.
  - ii) Synecology is the study of individuals or populations of a single species with respect to their environment.
  - iii) Most gaseous cycles are imperfect biogeochemical cycles.
  - iv) Competition in the community is not limited within the species.
  - v) Autotrophs are capable of photosynthesis.
2. Prepare a detailed account, on any one of the given environmental components: water, soil. (10)
3. Describe the ecological adaptations in plants and animals when there is scarcity or abundance of water with labeled diagrams. (10)
4. List the analytic and synthetic characters of a biological community. Explain in one or two lines the information provided by each character about the community. (10)
5. Write the characteristic features of a terrestrial or an aquatic ecosystem. (10)
6. How does the wildlife get affected by the degradation of the ecosystem due to various causes? Also give measures for the conservation of the wildlife. (5+5)
7. Make clear and labelled diagrams of the various stages of hydrarch or xerarch succession. (10)
8. Describe the different types of forests. Mention the importance of forests in maintaining the ecological balance of the global ecosystem (10)

9. Give the main difference and one example each of the following: (2½×4)
- i) Ecosystem and biosphere
  - ii) Keystone species and dominant species
  - iii) Gross primary production and net primary production
  - iv) Interspecific and intraspecific interactions
10. Write short notes on: (2×5)
- i) The Competitive Exclusion Principle
  - ii) Population density
  - iii) Measures to control global warming
  - iv) Depleted species
  - v) Use of the Red Data Book