

BBYCT-131

ASSIGNMENT BOOKLET

Bachelor's Degree Programme

(BSCM)

Biodiversity (Microbes, Algae, Fungi and Archegoniates)

Valid from 1st January, 2024 to 31st December, 2024



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

(2024)

Dear Student,

Please read the section on assignments in the Programme Guide for B. Sc. 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** for this course. The assignment is in this booklet, and it consists of two parts, Part A and B. The total marks of all the parts are 100, of which 35% are needed to pass it.

Instructions for formatting your Assignments

Before attempting the assignment please read the following instructions carefully:

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

ROLL 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) Solve this assignment, and **submit the complete assignment answer sheets within the due date.**
- 6) The assignment answer sheets are to be submitted to your Study Centre within the due date. **Answer sheets received after the due date shall not be accepted.**
We strongly suggest that you retain a copy of your answer sheets.
- 7) This assignment is **valid from 1st January, 2024 to 31st December, 2024.** If you have failed in this assignment or fail to submit it by December, 2024, then you need to get the assignment for the year 2025, and submit it as per the instructions given in the Programme Guide.
- 8) **You cannot fill the examination form for this course** until you have submitted this assignment.

We wish you good luck.

ASSIGNMENT

Course Code: BBYCT-131
Assignment Code: BBYCT-131/TMA/2024
Maximum Marks: 100

Note: Attempt all questions. The marks for each question are indicated against it.

1. a) Differentiate between DNA viruses from RNA viruses with the help of suitable diagram. (5×2=10)
b) Discuss the mechanism of transformation in bacteria with appropriate example and diagram.
2. a) Discuss the biological significance of heterospory in pteridophytes. (5×2=10)
b) Discuss why is the seed of gymnosperms considered having remarkable combination of two generation.
3. a) Explain the role of bryophytes in prevention of soil erosion/and as pioneers of vegetation. (5×2=10)
b) Enumerate the unifying characteristics of archegoniates.
4. Differentiate between the following pairs of terms: (4×2 ½ =10)
 - i) Flagella and Pili
 - ii) Transduction and conjugation
 - iii) Lysogenic and lytic cycle of bacteriophages
 - iv) Root of *Cycas* and *Pinus*
5. Prepare clear and well labelled diagrams of any four of the following: (4×2 ½ =10)
 - i) Formation of palmella stage in *Chchlamydomonas*
 - ii) L.S. of male cone of *Pinus*
 - iii) Life Cycle of *Fucus*
 - iv) Sexual reproduction in *Marchantia*
6. Compare the characteristics of liverworts, hornworts and mosses in a tabular form with appropriate diagrams. (10)
7. a) With the help of suitable diagram depict different types of chloroplast structures in algae. (5×2=10)
b) Explain vegetative reproduction in fungi with examples and diagram.
8. Discuss the application of Lichens in food, medicine and dyes. (10)

9. Describe the internal and external structure of a typical bacterium. (10)
Differentiate a bacterial cell from an archaeal cell.
10. Write notes on the following: (2 ½×4=10)
- i) Telome Theory
 - ii) Economic importance of Gymnosperms as medicine
 - iii) Economic importance of mycorrhiza
 - iv) Gemma cups