BBYCT-131

ASSIGNMENT BOOKLET

Bachelor's Degree Programme

(BSCG)

Biodiversity (Microbes, Algae, Fungi and Archegoniates)

Valid from 1st July, 2020 to 30th June, 2021

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

(2020-2021)

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 Part A and Part B of 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 July, 2020 to 30th June, 2021**. If you have failed in this assignment or fail to submit it by June, 2021, then you need to get the assignment for the year 2021-22, 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/2020-2021
Maximum Marks: 100

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

Marks

Part A

1. a) With the help of well labelled diagram, describe the internal structure of a typical bacterium. Differentiate a bacterial cell from an archaeal cell. (5)
   b) Describe the major three mechanisms for genetic recombination in bacteria. (5)

2. a) Are viruses living? Comment. (2½)
   b) Describe the general structure of RNA virus (TMV) and DNA virus (T- phage) (2½)
   c) Describe the replication in bacteriophage. (5)

3. a) Make outline diagrams of different types of life cycles in algae. (5)
   b) Distinguish between Chytridiomycota and Ascomycota in terms of Ecology. (5)

4. a) List the salient characteristic of three classes of Division Bryophyta. (5)
   b) Discuss the role of Bryophytes in soil formation. (5)

5. a) Describe life cycle of a pteridophyte with proper diagram. (5)
   b) Compare the reproductive organs and reproduction of *Selaginella*, *Equisetum* and *Pteris* with proper diagrams. (5)

Part B

6. Describe the morphology of thallus, vegetative and sexual reproduction in *Fucus* with the help of clear and well labelled diagrams. (10)

7. Define and differentiate between ecto- and endo-mycorrhiza with the help of clear and well labelled diagrams. (5)

8. Explain the different structural, reproductive and physiological adaptations that have enabled aquatic ancestors to establish on terrestrial habitats. (10)

9. a) Compare and differentiate between roots of *Cycas* and *Pinus* with proper diagrams. (5)
   b) Give a diagrammatic representation of life cycle of *Pinus.* (5)
   c) Describe the anatomical structure of *Pinus* stem with proper diagram. (5)

10. Write notes on the following : (5×2=10)

    i) Telome theory
    ii) Types of steles in Pteridophytes
    iii) Pollination, fertilization and embryogeny in *Cycas*
    iv) Difference between Gymnosperms and Angiosperms
    v) Economic importance of Gymnosperms as food and medicine.

-x-x-x-