

BBYCT-135

ASSIGNMENT BOOKLET

Bachelor's Degree Programme

(BSCG)

(Plant Anatomy and Embryology)

Valid from 1st July, 2022 to 31st December, 2022



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

(2022)

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 July, 2022 to 31st December, 2022.** If you have failed in this assignment or fail to submit it by December, 2022, then you need to get the assignment for the year 2023, 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-135
Assignment Code: BBYCT-135/TMA/2022
Maximum Marks: 100

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

Part A

1. Define the following terms: (1×5=5)
 - i) Adventitious roots
 - ii) Cuticle
 - iii) Heterophylly
 - iv) Tapetum
 - v) Pollinia
2. a) Explain different types of meristems found in plants with the help of a well labelled diagram. (5)
b) Enumerate the major features of Tunica Corpus Theory of shoot apical organization. (5)
3. a) Enlist the major characteristic features of halophytes. (5)
b) List various types of simple and complex tissues. Describe complex tissues with suitable diagrams. (5)
4. Describe the secondary growth in dicot stem with the help of a well labelled diagram. (10)
5. Differentiate between: (3×5=15)
 - i) storied and non-storied cambium
 - ii) amoeboid and glandular tapetum
 - iii) self and cross pollination
 - iv) psychophily and hymenophily
 - v) open and closed style

Part B

6. a) State whether these statements are 'True' or 'False': (1×5=5)
 - i) Funiculus is the stalk by which seeds are attached to a fruit wall.
 - ii) Collenchyma is composed of living cells with lignified cell wall.
 - iii) Outer and inner tangential walls of the endothelial cells help in dehiscence of anther.
 - iv) In dichogamy, the androecium and gynoecium mature at the same time.
 - v) In most of the angiosperms the division of the zygote is transverse resulting in formation of a small apical cell and a large basal cell.

- b) Write short notes on: (2×5=10)
- i) advantages of cross pollination
 - ii) parthenocarpy
 - iii) pneumatophores
 - iv) commercial cork
 - v) insectivorous plants
7. a) List various types of ovules and describe them with outline diagrams. (5)
- b) Define apomixis and list its types. Discuss various causes of apomixis and its importance. (5)
8. Describe syngamy and triple fusion in angiosperms with the help of a well labelled diagram. Enlist the major functions of endosperm in plants. (10)
9. a) Describe the structure of a mature embryo sac with the help of a well labelled diagram. (2½)
- b) Trichomes play important role in plants, Justify the statement. (2½)
10. Differentiate between Intraspecific and Incompatibility Interspecific incompatibility. List the methods to overcome incompatibility and discuss the significance of incompatibility. (3+4+3)