

**BBYCT-135**

# **ASSIGNMENT BOOKLET**

**Bachelor's Degree Programme**

**(BSCG)**

**(Plant Anatomy and Embryology)**

**Valid from 1<sup>st</sup> July, 2020 to 30<sup>th</sup> 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:

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**ROLL NO.:** .....

**NAME:** .....

**ADDRESS:** .....

.....

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**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) 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 1<sup>st</sup> July, 2020 to 30<sup>th</sup> 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-135  
Assignment Code: BBYCT-135/TMA/2020-2021  
Maximum Marks: 100

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

1. a) Define the following terms : ( $\frac{1}{2} \times 10 = 5$ )
  - i) Osteosclereids
  - ii) Quiescent center
  - iii) Mangroves
  - iv) Adventive embryos
  - v) Tyloses
  - vi) Phelloderm
  - vii) Dichogamy
  - viii) Heterophylly
  - ix) Apomixis
  - x) Cross pollination
- b) Describe in brief the various morphological and anatomical adaptations in xerophytes with diagrams. (5)
2. Describe simple tissues and complex tissue with proper diagrams. (10)
3. a) Compare the structures of a primary and secondary root also give diagram. (5)
- b) Differentiate between monocot and dicot leaf with labelled diagram. (5)
4. a) Describe secondary growth in dicot stem with labelled diagram. (5)
- b) Discuss theories of shoot apical organization with diagrams. (5)
5. a) Describe specialised epidermal cells with labelled diagram and its role in plants. (5)
- b) The pollen tube enters the embryo sac via three different routes. Explain and enumerate the advantages of cross pollination. (5)
6. a) Explain the various stages of embryo development in plants with the help of illustrations. (5)
- b) Explain the phenomenon of double fertilization in angiosperms with the help of a well labelled diagram. What is the role of endosperm in plants? (5)
7. a) Describe the structure of a mature embryo sac with labelled diagram. (5)
- b) Describe dispersal mechanisms found in seed. (5)

8. a) What is parthenocarpy. Describe various types of parthenocarpy found in plants. (5)
- b) Explain incompatibility and describe its types and significance. (5)
9. Differentiate between: (2×5=10)
- i) Heartwood and sapwood
  - ii) Porous and non-porous wood
  - iii) Dicot stem and monocot stem
  - iv) Glandular and non-glandular trichomes
  - v) Open and closed style
10. Write short notes on: (2×5=10)
- i) Tyloses
  - ii) Aerial roots
  - iii) Rhizomes
  - iv) Cambial variant in stems
  - v) Dendrochronology