

BBYET-143

ASSIGNMENT BOOKLET

Bachelor's Degree Programme

(BSCG)

(Economic Botany and Biotechnology)

Valid from 1st January, 2025 to 31st December, 2025



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

(2025)

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 is of 100 marks, 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 2025 to 31st December, 2025.** If you have failed in this assignment or fail to submit it by December, 2025, then you need to get the assignment for the year 2026, 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: BBYET-143

Assignment Code: BBYET-143/TMA/2025

Maximum Marks: 100

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

1. a) Define totipotency. Describe any two application of plant tissue culture. (5)
b) What is a protoplast? Describe the technique of somatic hybridization with the help of a diagram. (5)
2. Describe the origin, cytology and distribution of *Triticum aestivum* Linn. (10)
3. Describe the origin, taxonomy, morphological characters and distribution of rice. (10)
4. Write short note on Domestication syndrome and Colony hybridization. (10)
5. Describe the procedure for construction of cDNA and genomic libraries. (10)
6. a) Legumes are considered as nutritionally important foods? Explain the statement with the help of suitable examples. (5)
b) Write a detailed note on economic importance of spices. (5)
7. a) Plant growth regulators form an important component of plant tissue culture medium. Justify the statement. (5)
b) Discuss the role of plant tissue culture in germplasm conservation. (5)
8. Describe the technique of *Agrobacterium*-mediated transformation with the help of a diagram. (10)
9. Describe the morphology, cultivation and uses of any two fibre yielding plants. (10)
10. a) Differentiate between Northern and Western blotting. (5)
b) Write sort note on rhizogenesis and caulogenesis. (5)