

BBYET-143

ASSIGNMENT BOOKLET

Bachelor's Degree Programme

(BSCG)

(Economic Botany and Biotechnology)

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 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 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: BBYET-143

Assignment Code: BBYET-143/TMA/2024

Maximum Marks: 100

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

1. Write short notes on the following: (2 ½×8=20)
 - i) Domestication
 - ii) Molecular Assisted Breeding (MAB)
 - iii) Cryopreservation
 - iv) Orthodox seed
 - v) Recalcitrant seed
 - vi) Hybridoma technology
 - vii) Vector
 - viii) Horizontal gene transfer
2. Describe the origin, cytology and distribution of *Triticum aestivum* Linn. (10)
3. Describe the origin, morphological characters and uses of *Oryza sativa* Linn. (10)
4. Enlist the bioactive compounds present in legumes and associated health benefits. (10)
5. a) What is Biotechnology? Categorization and describe various branches of Biotechnology on the basis of colour. (5)
b) Describe any five applications of Biotechnology. (5)
6. a) What is a genetically modified organism (GMO)? With a help of a well labeled diagram (2+4+4=10)
b) Describe the technique of plant tissue culture and plant genetic engineering.
7. With a help of well labeled diagram describe the technique of DNA fingerprinting and PCR. (10)
8. What are restriction enzymes? Describe its classification and application in molecular biology. (2+8=10)
9. Describe the procedure for construction of Genomic and cDNA libraries. (10)