

Total Pages—5 **PG/IIIS/BOT/203.1 & 203.2/25**  
**(2023-24)**

**M. Sc. 2nd Semester Examination, 2025**

**BOTANY**

**PAPER — BOT-203.1 & 203.2 (2023-24)**

*Full Marks : 50*

*Time : 2 hours*

*Answer all questions*

*The figures in the right hand margin indicate marks*

*Candidates are required to give their answers in  
their own words as far as practicable*

**SECTION — I (PAPER — 203.1)**

*(Ecology)*

*[Marks : 20]*

**GROUP—A**

**1. Answer any two questions from the following :**

**2 × 2**

*( Turn Over )*

- (i) What is Lindeman 10% law ?
- (ii) What is niche differentiation ?
- (iii) Write the differences between primary and secondary succession.
- (iv) Differentiate between mutualism and commensalism.

**GROUP - B**

2. Answer any *two* questions from the following : 4 × 2
- (i) Write the process of succession according to Clement's theory.
  - (ii) Describe the double channel energy flow model with diagram.
  - (iii) Mention the current concept of Deep and Shallow ecology.

( 3 )

(iv) Discuss the structure and function of forest ecosystem.

**GROUP – C**

3. Answer any *one* question from the following :

8 × 1

(i) Discuss the logistic model of population growth. What is age pyramid? Describe the different types of age pyramid in a population.

3 + 2 + 3

(ii) Elaborate different morphological, anatomical and physiological adaptive features found in xerophytes. Name two true mangrove species from Indian Sundarbans.

6 + 2

**SECTION – II (PAPER – 203.2)**

*(Environmental Biology and Phytogeography)*

[Marks : 20]

( 4 )

**GROUP—A**

4. Answer any *two* questions from the following :

2 × 2

(i) What is Keystone species ?

(ii) Define alpha and beta diversity.

(iii) Where was Chipko movement initiated and in which year ?

(iv) Differentiate between *in-situ* and *ex-situ* conservation approaches.

**GROUP—B**

5. Write short notes on any *two* from the following :

4 × 2

(i) Bishnoi movement

(ii) Ramsar sites

(iii) Greenhouse gases

(iv) Silent valley movement in India.

GROUP – C

6. Answer any *one* question from the following :

(i) Briefly describe salient features of the  
Chipko and Appico movements.  $8 \times 1$  8

(ii) What are ozone depleting substances ?  
What is ozone layer depletion ? What  
measures should be taken to solve  
the problem of ozone depletion ?  $2 + 3 + 3$

[ Internal Assessment – 10 Marks ]

the following features