

PSG COLLEGE OF ARTS & SCIENCE (AUTONOMOUS)

MSc DEGREE EXAMINATION DECEMBER 2025
(Third Semester)

Branch - BOTANY

ECOLOGY AND PHYTOGEOGRAPHY

Time: Three Hours

Maximum: 75 Marks

SECTION-A (10 Marks)

Answer **ALL** questions

ALL questions carry **EQUAL** marks

$$(10 \times 1 = 10)$$

Cont...

SECTION - B (35 Marks)

Answer ALL questions

ALL questions carry EQUAL Marks

(5 × 7 = 35)

| Module No. | Question No. | Question | K Level | CO |
|------------|--------------|--|---------|-----|
| 1 | 11.a. | Analyze the relationship between the flow of energy and the cycling of nutrients within an ecosystem. | K4 | CO1 |
| | | (OR) | | |
| | 11.b. | Examine the role of decomposers in the cycling of nutrients. | | |
| 2 | 12.a. | Categorize an ecological pyramid. How does the energy transfer? | K4 | CO2 |
| | | (OR) | | |
| | 12.b. | Analyze the critical role of microorganisms in the nitrogen cycle. | | |
| 3 | 13.a. | Interpret what will happen when two different species help each other and two different species both need the same food and shelter? | K5 | CO3 |
| | | (OR) | | |
| | 13.b. | Explain the survival of plants that live in water. | | |
| 4 | 14.a. | Assess the strengths and weakness of current environmental education programs in India. | K5 | CO4 |
| | | (OR) | | |
| | 14.b. | Defend the role of non-government organization in environmental education in India. | | |
| 5 | 15.a. | Develop a comprehensive conservation strategy for the unique mangrove forests of the Tamil Nadu coastline. | K6 | CO5 |
| | | (OR) | | |
| | 15.b. | Design a novel application for remote sensing technology that assess the endemic vegetation in the Eastern Ghats of Tamil Nadu. | | |

SECTION -C (30 Marks)

Answer ANY THREE questions

ALL questions carry EQUAL Marks

(3 × 10 = 30)

| Module No. | Question No. | Question | K Level | CO |
|------------|--------------|--|---------|-----|
| 1 | 16 | List the various edaphic factors that determine plant growth. | K4 | CO1 |
| 2 | 17 | Analyze the statement 'The water cycle is the carrier or driving force for other biogeochemical cycles'. | K4 | CO2 |
| 3 | 18 | Assess the different stages of ecological succession in changing the community structure from a pioneer community. | K5 | CO3 |
| 4 | 19 | Will you recommend Man and Biosphere (MAB) program and explain why? | K5 | CO4 |
| 5 | 20 | How will you construct a map indicating the vegetation types of Tamil Nadu? | K6 | CO5 |