

Department of Botany
School of Chemical & Life Sciences
Jamia Hamdard, New Delhi-110062

M.Sc. BOTANY
III SEMESTER EXAMINATION DECEMBER 2025

Paper Name: **Plant Ecology and Biodiversity**

Paper Code: **MBO-CC302**

Time: **2:30 hours**

Maximum Marks: **60**

Note: This paper has 3 sections A, B, and C.

Section A: Answer all the questions. **Section B:** Attempt any 4 out of 6.

Section C: Attempt any 2 out of 4.

Abbreviations used:

CLO-Course Learning Outcomes

CLO 1: explain the various environmental factors and their interactions, develop concept of habitat and niche and population and community (understand)

CLO 2: analyze the major terrestrial biomes and phytogeographical division of India (analyze)

CLO 3: evaluate energy sources of ecological systems (evaluate); and

CLO 4: analyze importance and explain conservation and management of biodiversity (analyze and evaluate).

BTL-Bloom's Taxonomy Levels

1- Remembering, 2-Understanding, 3-Applying, 4-Analyzing, 5-Evaluating, 6-Creating

SECTION A

Very Short Type Question (15 questions)

15 x 1 = 15 marks

Q.No.	Questions	Marks	CLO	BTL
1	Enlist four abiotic factors	1	1	1
2	Which ecological pyramid is always upright?	1	3	4
3	What do you mean by ecesis?	1	2	2
4	Name important nitrogen fixing micro organisms.	1	3	5
5	What is nudation?	1	2	4
6	Define species richness	1	4	2
7	Write full form of MAB.	1	4	1
8	What is the main driving force of water cycle?	1	3	5
9	What is the basis of speciation?	1	4	5
10	Give total number of Biosphere reserves.	1	4	1
11	Which trophic level posses more energy?	1	3	5
12	Define ecotone.	1	2	1
13	What is r- selection?	1	1	2
14	Give smallest example of ecosystem	1	2	5
15	What do you mean by sere?	1	2	2

SECTION B

Short Type Question. (Attempt any **FOUR** out of six)

4 x 5 = 20 marks

Q.No.	Question	Marks	CLO	BTL
1	What is the process of N ₂ - fixation? and how rhizobium play the role?	5	3	5
2	Explain the role of decomposers.	5	3	3
3	Justify the statement: food webs are more stable than food chains.	5	3	5
4	What are the ecological changes occurs during succession?	5	2	3
5	Mention the features of estuarine ecosystem	5	3	3
6	Explain resource partitioning with examples	5	1	5

SECTION C

Long type Question (Attempt any **TWO** out of three)

2 x 12.5 = 25 marks

Q.No.	Question	Marks	CLO	BTL
1	Discuss biological region of India along with key features of Western Ghats.	12½	4	4
2	Explain different levels of bio- diversity and methods to measure species diversity.	12½	4	5
3	Discuss concept of energy flow with a suitable model.	12½	2	4