QP CODE: D1BBT2402

Name: .....
Reg.No.: .....

FIRST SEMESTER FYUGP EXAMINATION NOVEMBER 2024

MINOR

BOT1MN101 PLANT ECOLOGY, CONSERVATION AND PLANT INTERACTIONS

Time : 2 Hrs **Maximum Marks : 70**

BL : Bloom's Taxonomy Level (1 to 6) CO : Course Outcome

Section A — Ceiling Marks : 24

Answer all questions. Each carries 3 marks.

No.	Question	M	BL	CO
1.	Explain how the structure of Opuntia helps it conserve water in a desert environment ?	3	3	CO1
2.	Illustrate how ecological factors can influence the distribution of plant species within an ecosystem ?	3	4	CO1
3.	Explain the main stages in Hydrosere succession, focusing on early aquatic stages ?	3	3	CO1
4.	What is a biodiversity hotspot? Give one example from India?	3	1	CO2
5.	Evaluate the importance of preserving endemic species in biodiversity hotspots ?	3	5	CO2
6.	List two main causes of biodiversity loss and briefly describe their impacts on ecosystems?	3	2	CO2
7.	Explain how the loss of gene pools in plant and animal species can affect ecosystem resilience?	3	5	CO2
8.	How do sacred groves contribute to the conservation of biodiversity and the preservation of cultural heritage?	3	5	CO2
9.	How do plant-pollinator interactions contribute to plant reproduction? Mention at least two types of pollinators.	3	3	CO3
10.	Define pollination syndromes and floral specialization. How do they influence pollinator behaviour and plant reproduction?	3	5	CO3

Section B — Ceiling Marks : 36

Answer all questions. each carries 6 marks.

No.	Question	M	BL	CO
11.	Compare and contrast the ecological adaptations of hydrophytes and xerophytes, highlighting their responses to water availability.	6	4	CO1
12.	Define biodiversity and explain its importance in maintaining ecosystem stability and resilience.	6	1	CO2
13.	Analyze the primary causes of extinction and changes in biodiversity. How do human activities exacerbate these factors?	6	4	CO2

14.	Analyze the significance of pollen banks in plant breeding and conservation efforts. How do they support the preservation of genetic diversity?	6	4	CO2
15.	Describe cryopreservation as an ex-situ conservation technique. Discuss its advantages and challenges in preserving plant genetic resources.	6	5	CO2
16.	Provide an overview of plant interactions within ecosystems. Discuss the significance of these interactions for ecosystem dynamics and species survival.	6	2	CO3
17.	Describe the different types of mutualistic relationships between plants and animals, providing specific examples for each type.	6	2	CO3
18.	Create a comprehensive plan for a research project aimed at studying the effects of invasive species on native plant-animal interactions. Include your objectives, methods, and expected outcomes.	6	6	CO3

Section C

Answer any one question. Each carries 10 marks. (1x10=10 marks)

No.	Question	M	BL	CO
19.	Describe the role of epiphytes like Vanda in tropical ecosystems. Explain their adaptations for obtaining nutrients and retaining water.	10	2	CO1
20.	Define biodiversity conservation and its significance. Compare in-situ and ex-situ conservation methods with examples.	10	4	CO2

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