

SHRIMATHI DEVKUNVAR NANALAL BHATT VAISHNAV COLLEGE FOR WOMEN  
(AUTONOMOUS)

(Affiliated to the University of Madras and Re-accredited with 'A+' Grade by NAAC)

Chromepet, Chennai - 600 044.

M.Sc.PBPBT - END SEMESTER EXAMINATIONS - APRIL 2025

SEMESTER - III

**20PPBCT3007 - Ecology and Phytogeography**

Total Duration : 2 Hrs. 30 Mins.

Total Marks : 60

### **Section B**

Answer any **SIX** questions ( $6 \times 5 = 30$  Marks)

1. Define an ecosystem and list its major components with examples.
2. Illustrate the carbon cycle and explain its role in climate regulation.
3. Explain the concept of units of vegetation and their classification.
4. Classify India's vegetation based on climatic regions with key characteristic.
5. Describe the different types of ecological pyramids with appropriate examples.
6. Compute the GWP of greenhouse gases and analyze their climate impact.
7. Describe the process of community development with examples.
8. Infer the impact of continental drift on plant endemism.

### **Section C**

I - Answer any **TWO** questions ( $2 \times 10 = 20$  Marks)

9. Compare terrestrial and aquatic ecosystems with their adaptations.
10. Classify biogeochemical cycles and predict their ecological importance.
11. Examine the effectiveness of the Kyoto Protocol and Paris Agreement in reducing greenhouse gas emissions.
12. Distinguish ecological communities by structure, function, and composition with examples.

II - Compulsory question ( $1 \times 10 = 10$  Marks)

13. Justify why the Western Ghats and Indo-Burma region are considered biodiversity hotspots.

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