

Use separate answer
script for each group.

M.Sc. Examination, 2019
Semester-IV
Botany
Paper: MBC-42
(Plant Ecology & Environmental Botany)

Time: Three Hours

Full Marks: 48

Questions are of value as indicated in the margin

Group-A (Plant Ecology)

Answer question **No.1** and **any two** from the rest

1. Answer **any four** of the following: 1×4=4
 - (a) What are *chamaephytes*?
 - (b) Name the dispersion pattern where in every individual can occur in a place.
 - (c) What is amensalism?
 - (d) How is biomass different from standing crop?
 - (e) What is robustness in ecosystem stability?
 - (f) Name the most extensive soil order.
2. Discuss the significance of biodiversity. Compare the traits of early and late successional stages. 5+5=10
3. Describe a single channel energy flow model. What is Y-shaped energy flow model? Define consumption efficiency. How does it vary in different ecosystems? 5+2+1+2=10
4. Write short notes on **any four**: 2.5×4=10
 - (a) Density dependent population growth;
 - (b) Traits of invasive plants;
 - (c) Gene banks;
 - (d) Stratification in lentic biomes;
 - (e) Survivorship curves;
 - (f) Calcification.

Group- B(Environmental Botany)

Answer question **No.1** and **any two** from the rest

1. Write short notes on **any four** of the following: 1×4=4
 - a) Silent Valley Movement
 - b) Role of HSP70 against protein denaturing
 - c) Carbon as a prime element of life
 - d) Mercury toxicity
 - e) CCM in Cyanobacteria
 - f) Bio-magnification

P.T.O.

(2)

2. What is acid rain? State the mechanism of formation of acid rain. Describe briefly, the impact of acid rains on aquatic and terrestrial lives. 1+4+5 =10
 3. What is “Global warming”? State the physico-chemical properties of greenhouse gases that make them effective for trapping heat energy. Briefly describe two important evidences in support of anthropogenic release of greenhouse gases. 2+4+4=10
 4. Discuss the various guidelines of WHO for measurement of water quality. Describe the conventional method for large scale purification of water. 5+5=10
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