

Odd Semester, 2020

(Held in March, 2021)

BOTANY

(Honours)

[BOTH-502 (T)]

(Ecology and Conservation Biology)

Marks : 56

Time : 3 hours

*The figures in the margin indicate full marks
for the questions*

Answer Question No. **1** which is compulsory and
other **four**, selecting **one** from each Section

1. Write short notes on the following : 4×4=16
 - (a) Fire as an ecological factor in nutrient cycling
 - (b) Survivorship curves
 - (c) Pyramid of biomass in an aquatic ecosystem
 - (d) Causes of ozone layer depletion

SECTION—I

2. What are ecological factors? Describe edaphic factors and their significance in plant distribution. 4+6=10

3. Describe the anatomical adaptational features of xerophytes and hydrophytes with the help of illustrations. 5+5=10

SECTION—II

4. What are population interactions? Discuss briefly symbiosis and parasitism in plants with suitable examples. 4+3+3=10
5. What are primary and secondary ecological successions? Describe briefly the different stages of ecological succession under xeric conditions. 2+2+6=10

SECTION—III

6. Describe the flow of energy in an ecosystem by 'box-and-pipe' model. 10
7. What is biogeochemical cycle? Give an account of phosphorus cycle and its importance in nature. 2+6+2=10

SECTION—IV

8. What is greenhouse effect? Discuss on the impact of greenhouse gases on climate change and write on some remedial measures to abate the impact of global warming. 3+5+2=10
9. Differentiate between *ex situ* and *in situ* conservation. Give a brief account on Botanical Gardens and their role in conservation of flora in India 2+6+2=10

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