

G-3/358(B)/22

Roll No.

III Semester Examination, January 2022

M.Sc.

BOTANY

Paper IV
(Limnology-I)

Time : 3 Hours]

[Max. Marks : 80

Note : *All questions are compulsory. Question Paper comprises of 3 Sections. Section A is objective type/multiple choice questions with no internal choice. Section B is short answer type with internal choice. Section C is long answer type with internal choice.*

SECTION A

1×8=8

(Objective Type/Multiple Choice Questions)

Choose the correct answer :

1. Which of the following lakes are usually over 18 meters in depth ?
 - (a) Oligotrophic lake
 - (b) Mesotrophic lake
 - (c) Eutrophic lake
 - (d) Dystrophic lake

P.T.O.

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2. Most of the temperate lakes are :
(a) Tectonic lakes (b) Volcanic lakes
(c) Glacial lakes (d) Solution lakes
3. In which of the following zone light intensity is below 1% of the surface ?
(a) Aphotic zone (b) Profundal zone
(c) Euphotic zone (d) Dysphotic zone
4. The distance on the lake surface between the two more distant points on the lake shore is known as :
(a) Maximum length of lake
(b) Maximum width of lake
(c) Area of the lake
(d) Volume of the lake
5. Heat losses in lake water occurs due to :
(a) Specific conductance of heat to the air
(b) Evaporation
(c) Out flow of surface water
(d) All of the above
6. The lake becomes stratified into :
(a) Epilimnion (b) Hypolimnion
(c) Metalimnion (d) All of these

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7. Oxygen solubility in lake water is high at :
(a) 0 C (b) 10 C
(c) 30 C (d) 40 C
8. With the increase in pH value, total free carbon dioxide in lake water :
(a) Increases
(b) Decreases
(c) No change
(d) Initially increases then decreases

SECTION B

4×6=24

(Short Answer Type Questions)

Note : Answer the following questions in **250** words.

Write short note on :

Unit-I

1. Retention and replacement of water in lakes.

Or

Global water balance.

Unit-II

2. Zonation in lakes.

Or

Morphometric parameters of lake.

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Unit-III

3. Stratification of heat in lakes.

Or

Colour and transparency of light of lake water.

Unit-IV

4. Alkalinity of lake water.

Or

Change of oxygen in lake water.

SECTION C

4×12=48

(Long Answer Type Questions)

Note : Answer the following questions in 500 words.

Unit-I

1. Write a detailed note on classification of lakes.

Or

Discuss the origin of lakes.

Unit-II

2. Write an essay on Eutrophication.

Or

Discuss the flow of energy in lake Ecosystem.

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Unit-III

3. Discuss the temperature as a physical characteristics of lake water.

Or

Explain the movements of water in a lake.

Unit-IV

4. Describe the phosphorus cycle in lakes.

Or

Describe the Arsenic and fluoride in lake water and its effect.

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