

This question paper contains 4 printed pages]

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S. No. of Question Paper : 12812

Unique Paper Code : 42237913

Name of the Paper : DSE Aquatic Biology

Name of the Course : B.Sc. Zoology/Life Science

Semester : VI (CBCS-LOCF)

Duration : 3 Hours

Maximum Marks : 75

(Write your Roll No. on the top immediately on receipt of this question paper.)

Attempt five questions in all.

Question No. 1 is compulsory.

Draw diagrams wherever necessary.

1. (a) Define the following :

1×8=8

(i) Euphotic Zone

(ii) Bioerosion

(iii) Summer Stagnation

(iv) Halocline

(v) Periphyton

P.T.O.

(vi) Lagoon

(vii) Neuston

(viii) Oligomixis

(ix) Stragglers.

(b) Distinguish between the following :

2×5=10

(i) Hypolimnion and Epilimnion

(ii) Lotic and Lentic ecosystems

(iii) Agriculture and Industrial sewage

(iv) Fringing reef and Barrier reef

(v) Endemic and exotic species.

(c) Expand the following :

1×4=4

(i) UNFCCC

(ii) EIA

(iii) CPUE

(iv) SDD.

(d) State whether the following statements are True or False : 1×5=5

(i) Dystrophic lake generally contains more than 350 µg/L Nitrogen content.

- (ii) Bioluminescence in deep water fishes are adaptation majorly for mating.
 - (iii) Cold water can be defined as water whose annual temperature ranges from 1 to 5°C.
 - (iv) Backwaters are water bodies that are partially connected with river system and partially closed from the sea.
 - (v) Constructions and human activities are allowed in CRZ-II.
2. Write an essay on coral reefs. Explain their formation, structure, fauna and the impact of climate change. 12
3. (a) Compare the physical and biological characteristics of freshwater and marine ecosystems. 6
- (b) Adaptations of organisms in intertidal zones. 6
4. (a) Discuss the various challenges in maintaining sustainable aquatic environment. 6
- (b) Briefly explain the classification of lakes based on origin. 6
5. (a) Discuss in detail the physico-chemical characteristics of lake ecosystems and how they influence aquatic life. 7
- (b) Explain the various morphological adaptations of hill streams. 5

6. (a) Discuss the effects of nitrate levels in water on fish health and growth. 5
- (b) Discuss the concept of watershed management and its importance in river basin conservation. 7
7. Write short notes on any *three* of the following : 4×3=12
- (i) Minor Carp species
 - (ii) Oil Spill
 - (iii) Intertidal Zone
 - (iv) Ornamental fishes.