

Zoology CBCS (PG)

[Third Semester]

Paper - 304

Full Marks : 40

Time : 2 hours

The figures in the right-hand margin indicate marks.

Candidates are required to give their answers in their own words as far as practicable.

Illustrate the answers wherever necessary.

Group – A

(Biological Oceanography)

1. Answer any two from the following : **2×2=4**

- a) What do you mean by algal bloom?
- b) Define nekton and benthos.
- c) Write the main three characters of estuary.
- d) What is food web?

2. Answer any two from the following questions : **2×4=8**

- a) Describe with diagram the vertical stratification of ocean.
- b) Describe how light intensity helps photosynthesis in marine environment.
- c) State the effects of pH on marine fishes.
- d) Write down the names of two pelagic and two benthic organisms of ocean.

3. Answer any one of the followings. **1×8=8**

- a) Write briefly the theories regarding coral reef formation.
- b) Describe how chemical factors affect the marine organisms.

Group -B

(Applied Biology & Ecological Principle)

4. Answer any two from the following question : **2×2=4**

- a) What do you mean by comparative biogeography?
- b) What is realized niche?
- c) Differentiate between interference competition and exploitative competition?
- d) Mention any two characteristic features of r-selected species with example.

5. Answer any two from the following : **2×4=8**

- a) Why both fundamental & realized niche are same for *Semibalanus balanoides*? What is phytoextraction? 3+1
- b) What is island biogeography? Who developed island biogeography theory? What is niche overlap? 2+1+1

- c) Discuss about Tundra with reference to climate, area, plant species and associated fauna. 4
- d) Describe the effect of immigration and emigration on species richness in islands. 4

6. Answer any one from the following: 1×8=8

- a) Write down the characteristics of Temperate Grasslands, Savannahs and Shrub lands. Define metapopulation. Mention the types of population growth curves studied by you. 5+1+2
- b) Briefly describe the process of competitive exclusion using three species of Paramecium. Discuss different types of bioremediation processes. 4+4