6. Write explanatory notes on the following **(any three)** : (5×3)

(i) Benthic-Pelagic Coupling

(ii) Marine sediments

(iii) Non-equilibrium dynamics

(iv) Ecological stoichiometry

[This question paper contains 4 printed pages.]

Your Roll No.....

Sr. No. of Question Paper : 1605 **G**

Unique Paper Code : 2182012303

Name of the Paper : Marine Ecology

Name of the Course : **B.Sc. (Hons.) Environmental Sciences-C**

Semester : III

Duration : 2 Hours Maximum Marks : 60

Instructions for Candidates

1. Write your Roll No. on the top immediately on receipt of this question paper.
2. Answer any **four** questions.
3. **All** questions carry equal marks.

1. Write short notes on the following : (3×5)

(i) Calcite Compensation Depth

(ii) Spring bloom

(iii) Benthic macrophytes

(iv) Metapopulation

(v) Resource Partitioning

2. Differentiate between the following (**any three**) : (5×3)

(i) Continental margins and Mid-ocean ridges.

(ii) Western Boundary Current and Eastern Boundary Current.

(iii) Pelagic and Benthic Ecosystems.

(iv) Commensalism and Amensalism.

3. (a) Explain the Ocean Circulation which involves the phenomenon of El Nino and La Nina. How do these two phenomena affect the global climate system? (10)

(b) Explain the vertical structure of the pelagic water column. (5)

4. (a) Discuss how Metabolic scaling and range size specialization of species help us understand the abundance and diversity of species in an ecosystem. (10)

(b) Explain how climate change is affecting the Arctic Ocean and what are its implications for marine organisms. (5)

5. (a) What are Marine Reserves? How do they help in the conservation and management of the oceans? (8)

(b) Discuss the relevance of Metapopulation theory in Marine ecosystems. (7)