

<b>F-1648</b>
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<b>Sub. Code</b>
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<b>7BMB1C1</b>
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**B.Sc. DEGREE EXAMINATION, APRIL 2019**

**First Semester**

**Marine Biology**

**FUNDAMENTALS OF OCEANOGRAPHY**

**(CBCS – 2017 onwards)**

Time : 3 Hours

Maximum : 75 Marks

**Part A**

(10 × 2 = 20)

Answer **all** questions.

1. Guyot
2. Intertidal zone
3. Semidiurnal tide
4. Salinity
5. Particulate Organic Matter
6. Reactive gases
7. Picoplankton
8. Diatoms
9. Parasitism
10. Hydrothermal vent

**Part B** $(5 \times 5 = 25)$ 

Answer **all** questions, choosing either (a) or (b).

11. (a) Describe the geography of the Oceans.

Or

- (b) Explain the major divisions of marine environment.

12. (a) How did tides originate?

Or

- (b) Discuss the types of ocean currents.

13. (a) Brief about non-reactive gases and its solubility nature in seawater.

Or

- (b) Elaborate the phosphorous cycle in seawater.

14. (a) Explain the role of plankton in coastal biodiversity.

Or

- (b) Classify the zooplankton based on size and depth distribution.

15. (a) Discuss the ecology of intertidal zone.

Or

- (b) Narrate the migration and random genetic drift.

**Part C** $(3 \times 10 = 30)$ 

Answer any **three** questions.

16. Discuss the historical development of oceanography.
17. Elaborate the types and properties of ocean waves.

18. Explain the silicate cycle and its significance in ocean ecology.
  19. Describe the method of estimation of primary productivity.
  20. Differentiate the pelagic ecology from deep sea ecology.
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<b>Sub. Code</b>
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<b>7BMB1C2</b>
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**B.Sc. DEGREE EXAMINATION, APRIL 2019**

**First Semester**

**Marine Biology**

**INVERTEBRATE**

**(CBCS – 2017 onwards)**

Time : 3 Hours

Maximum : 75 Marks

**Part A**

(10 × 2 = 20)

Answer **all** questions.

1. Phyla.
2. Eumetazoa.
3. Cephalothorax.
4. Nacre.
5. Goblet cells.
6. Iliocolonic ring.
7. Tomaria larva.
8. Hemichordata.
9. Neural gland.
10. Urochordata.

**Part B**

(5 × 5 = 25)

Answer **all** questions, choosing either (a) or (b).

11. (a) Write about evolutionary significance of Onychophora (Peripatus).

Or

- (b) What are the salient features of invertebrates?

12. (a) Describe the digestive system of shrimp.

Or

- (b) Write brief account on affinities of the minor phyla Chaetogantha.

13. (a) Give an account on nervous system of Branchiostoma.

Or

- (b) Write short notes on excretory function in Balanoglossus.

14. (a) Write brief notes on general characteristics of Prochordata.

Or

- (b) Explain early developmental stages of Tunicata (Prochordata).

15. (a) Give an account on respiratory system of Ascidian.

Or

- (b) Write about retrogressive metamorphosis in Herdmania.

**Part C** $(3 \times 10 = 30)$ 

Answer any **three** questions.

16. Explain theories for the origin of Metazoa.
  17. Give an account on water vascular system of starfish.
  18. Describe reproduction and development of Amphioxus.
  19. Explain the classes of Urochordata with salient features.
  20. Give a detailed description on circulatory system of Ascidian.
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**Sub. Code**

**7BMB2C1**

**B.Sc. DEGREE EXAMINATION, APRIL 2019**

**Second Semester**

**Marine Biology**

**VERTEBRATE**

**(CBCS – 2017 onwards)**

Time : 3 Hours

Maximum : 75 Marks

**Part A**

(10 × 2 = 20)

Answer **all** questions.

1. Agnatha
2. Neurotoxin
3. Placoderms
4. Lateral line sense organ
5. Cerebellum
6. Aerodynamic
7. Free – Run Eggs
8. Cosmoid
9. Morula
10. Aortic arche

**Part B****(5 × 5 = 25)**Answer **all** questions choosing either (a) or (b).

11. (a) Explain the biting mechanisms of snakes

Or

(b) Classify the Amphibia

12. (a) Describe the comparative anatomy of vertebrates

Or

(b) Narrate the structure and function of elasmobranches

13. (a) Discuss the effects of terrestrialization on amphibians

Or

(b) Elaborate the evolution of reptiles

14. (a) Give an account on dentition in mammals

Or

(b) Write a note on gametogenesis in fish

15. (a) Brief the fate map

Or

(b) Elucidate the development of Aortic arches of frog.



**Part C**

(3 × 10 = 30)

Answer any **three** questions.

16. Classify the fishes with an example
  17. Elaborate the structure and function of bony fishes
  18. Discuss the origin and evolution of birds
  19. Explain the various types of eggs and fertilization of eggs
  20. Describe the cleavage, blastulation and gastrulation in fishes
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<b>7BMB2C2</b>
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**B.Sc. DEGREE EXAMINATION, APRIL 2019**

**Second Semester**

**Marine Biology**

**ANIMAL PHYSIOLOGY**

**(CBCS – 2017 onwards)**

Time : 3 Hours

Maximum : 75 Marks

**Part A**

(10 × 2 = 20)

Answer **all** questions.

1. Plankton.
2. Chelate legs.
3. Haemocyanin.
4. Ctenidia.
5. Ecdysis.
6. Ganglion.
7. Photophores.
8. Circadian rhythm.
9. Green gland.
10. Ovuliparity.

**Part B** $(5 \times 5 = 25)$ 

Answer **all** questions, choosing either (a) or (b).

11. (a) Describe the types of food for marine organisms

Or

- (b) Explain digestive mechanism of shrimp.

12. (a) Write about respiration of fishes

Or

- (b) Give short notes on secondary respiratory organs

13. (a) Explain the growth with hormone in fishes.

Or

- (b) Write short notes on neuro-hormones in animals.

14. (a) Explain Chromatophores in marine animals.

Or

- (b) What is luminescent organ explain?

15. (a) Give an account on reproduction of Polychaetes.

Or

- (b) Write brief notes on excretion in Annelida.

**Part C** $(3 \times 10 = 30)$ 

Answer any **three** questions.

16. Describe the feeding and digestion mechanism of marine fish.
17. Write about different types of respiratory pigments and their functions.

18. Explain types of sense organs in marine fishes.
  19. Give an account on pigments of marine animals.
  20. Explain the excretion and elimination process of nitrogen in mammals.
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