

F-2662

Sub. Code

7BMB1C1

B.Sc. DEGREE EXAMINATION, NOVEMBER 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. Littoral zone.
2. Challenger Expedition.
3. Spring tide.
4. Ocean current.
5. Salinity.
6. Dissolved oxygen.
7. Diatoms.
8. Primary consumer.
9. Epizoism.
10. Hibernation.

Part B**(5 × 5 = 25)**

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

11. (a) Write about the history of Oceanography.

Or

- (b) What is benthic environment? Explain the divisions.

12. (a) Explain the properties of waves.

Or

- (b) What is Estuaries? Explain the types.

13. (a) Give an account on dissolved organic matter.

Or

- (b) Write the concept of chlorinity and salinity of seawater.

14. (a) Give an account on classification of phytoplankton.

Or

- (b) What are the roles of plankton in coastal biodiversity?

15. (a) What is parasitism? Give an example.

Or

- (b) Describe the Hardy Weinberg Law.

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

Answer any **three** questions.

16. Write an essay on geomorphology of Ocean.
 17. Describe in detail — Wind and Ocean circulation.
 18. Write a detailed note on chemical properties of seawater.
 19. Write an essay on primary productivity of coastal environment.
 20. Discuss about the pelagic and deep sea ecology.
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F-2663

Sub. Code

7BMB1C2

B.Sc. DEGREE EXAMINATION, NOVEMBER 2019**First Semester****Marine Biology****INVERTEBRATE****(CBCS – 2017 onwards)**

Time : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** questions.

1. Arachnids.
2. Symmetry.
3. Sponges.
4. Planula larva.
5. Cephalochordata.
6. Balanoglossus.
7. Notochord.
8. Tornaria larva.
9. Urochordata.
10. Tadpole larva.

Part B

(5 × 5 = 25)

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

11. (a) Write about the salient features of invertebrate.

Or

- (b) Explain the evolutionary significance of Peripatus.

12. (a) Write about the main classes of phylum platyhelminthes.

Or

- (b) What are the general features of Hemichordata?

13. (a) Describe the respiratory system of shrimp.

Or

- (b) Write an account on morphology and affinities of Balanoglossus.

14. (a) Describe the general characteristic features of Prochordata.

Or

- (b) Write about the principles and classification of Prochordata.

15. (a) Explain the retrogressive metamorphosis in Herdmania.

Or

- (b) Write about the classification of Urochordata with examples.

Part C

(3 × 10 = 30)

Answer any **three** questions.

16. Write an essay on origin and evolution of invertebrate's phyla.
 17. Write a detailed account on salient features of marine invertebrate minor phyla — Brachiopoda, Phoronida and Pogonophora.
 18. Describe in detail — morphology, anatomy and physiology of Amphioxus.
 19. Write about the classification of prochordata with suitable examples.
 20. Write an essay on post embryonic development of Herdmania with suitable diagrams.
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Sub. Code

7BMB2C1

B.Sc. DEGREE EXAMINATION, NOVEMBER 2019

Second Semester

Marine Biology

VERTEBRATE

(CBCS – 2017 onwards)

Time : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** the questions.

1. Proteroglyphous snakes
2. Anura
3. Hagfish
4. Osteichthyes
5. Tetrapods
6. Ostrich
7. Cycloid scale
8. Ripe phase
9. Nostril
10. Xenopus

Part B

(5 × 5 = 25)

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

11. (a) Classify the pisces with salient features.

Or

- (b) Lists the poisonous and non poisonous snakes.

12. (a) Explain the adaptive radiation of elasmobranches.

Or

- (b) Reveal the structure and function of bony fishes.

13. (a) Describe the origin of amphibians.

Or

- (b) Elaborate the evolution and adaptive radiation of reptiles.

14. (a) Narrate the various types of fish scales with neat diagram.

Or

- (b) Give an account on classification of Aves.

15. (a) Explain the morphogenetic movements in gastrula of fish.

Or

- (b) Brief on fish life cycle with neat diagram.

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

Answer any **three** questions.

16. Describe the biting apparatus, types of fangs and biting mechanism of snakes.
 17. Brief the origin, evolution and anatomy of vertebrates through geological time scale.
 18. Narrate the origin and biology of birds.
 19. Explain the post fertilization development of fish.
 20. Write an essay on development of respiratory organs in frog.
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F-2665

Sub. Code

7BMB2C2

B.Sc. DEGREE EXAMINATION, NOVEMBER 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. *Artemia*
2. Digestive enzymes
3. Gills
4. Papulae
5. Vasopressin
6. Lateral line
7. Homeostasis
8. Carotenoids
9. Nephridia
10. Hectocotylus

Part B

(5 × 5 = 25)

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

11. (a) Write about different feeding mechanism in Polychaetes.

Or

- (b) Explain the digestive system of Sepia.

12. (a) Write short notes on respiration mechanism in crustaceans.

Or

- (b) Write a brief notes on factors affecting respiration in aquatic animals.

13. (a) Explain nerve system of any one vertebrate.

Or

- (b) What is moulting explain with examples?

14. (a) Describe about "Bioluminiscence"

Or

- (b) Explain "Biological clock" in animals.

15. (a) Write about excretory products of animals.

Or

- (b) Write short notes on asexual reproduction of Sponges.

Part C

(3 × 10 = 30)

Answer any **THREE** questions.

16. Explain the circulatory system of Star fish.
 17. Give a detail notes on different types of aquatic respiration.
 18. Explain hormonal regulations in fish.
 19. Write about osmoregulation mechanisms in marine animals.
 20. Write an essay on excretory mechanism of marine animals.
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Sub. Code

7BMB3C1

B.Sc. DEGREE EXAMINATION, NOVEMBER 2019

Third Semester

Marine Biology

CELL BIOLOGY AND GENETICS

(CBCS – 2017 onwards)

Time : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** questions.

1. Prokaryotic cell
2. T4 phage.
3. Apoptosis.
4. Amitosis.
5. DNA polymerase.
6. Translation.
7. Operon hypothesis.
8. Genetic code.
9. tRNA.
10. DNA elongation.

Part B**(5 × 5 = 25)**

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

11. (a) Describe the structure and functions of cell membrane.

Or

- (b) Explain about active and passive transport mechanism with suitable diagram.

12. (a) Describe the mitosis and cell cycle.

Or

- (b) What are the differences in prokaryotic and eukaryotic cell?

13. (a) Write the structure and functions of DNA.

Or

- (b) Explain about different types of DNA replication.

14. (a) Describe the Operon concept with illustrations.

Or

- (b) Define transcriptional and post-translation controls.

15. (a) Explain about amitosis with diagrams.

Or

- (b) What are the significance of mitosis?

Part C

(3 × 10 = 30)

Answer any **three** questions.

16. Write an essay on structure and functions of cellular organelles.
 17. Describe in detail with illustrations - Meiosis.
 18. Write an essay on Protein synthesis.
 19. Write an essay on application of genetic engineering.
 20. List out the main functions of DNA
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