

**F-7201**

**Sub. Code**

**7BMB2C1**

**B.Sc. DEGREE EXAMINATION, APRIL 2022**

**Second Semester**

**Marine Biology**

**VERTEBRATE**

**(CBCS – 2017 onwards)**

Time : 3 Hours

Maximum : 75 Marks

**Part A**

(10 × 2 = 20)

Answer **all** questions.

1. Osteichthyes.
2. Gnathostomata.
3. Holocene.
4. Crocodylia.
5. IUCN.
6. Morula.
7. Sirenia.
8. Dugongidae.
9. Gametogenesis.
10. Aortic arches

**Part B**

(5 × 5 = 25)

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

11. (a) Explain the salient features of marine reptiles.

Or

- (b) Write about the biting mechanism in snakes.

12. (a) Describe about the comparative anatomy of vertebrates through geological time scale.

Or

- (b) Give a detailed account on classification and general features of elasmobranchs.

13. (a) What are the effects of terrestrialization on amphibians?

Or

- (b) Write about the excretory system in reptiles.

14. (a) Give an account on development of placoid scale.

Or

- (b) Write about the salient features and classification of sea birds.

15. (a) Give an account on development of Aortic arches of frog.

Or

- (b) Explain about gastrulation in fish.

**Part C**

(3 × 10 = 30)

Answer any **three** questions.

16. Describe the classification and general features of Pisces.
17. Give a detailed account on adaptive radiations in bony fishes.
18. Write an essay on origin and evolution of birds.
19. Write a detailed note on Cleavage, Blastulation and Gastrulation of fish with illustrations.
20. Discuss in detail — Dentition in Mammals.

---

**F-7202**

**Sub. Code**

**7BMB2C2**

**B.Sc. DEGREE EXAMINATION, APRIL 2022**

**Second Semester**

**Marine Biology**

**ANIMAL PHYSIOLOGY**

**(CBCS – 2017 onwards)**

Time : 3 Hours

Maximum : 75 Marks

**Part A**

(10 × 2 = 20)

Answer **all** questions.

1. Proteinase
2. Carnivorous
3. Chlorocruorins
4. Trachea
5. Lateral line
6. Somatolactin
7. Luciferin
8. Circadian rhythm
9. Protandrous hermaphrodite
10. Ureotelic.

**Part B**

(5 × 5 = 25)

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

11. (a) Explain the mode of transport of food through gut in animal.

Or

- (b) Describe the various digestive enzymes occurring in marine organisms.

12. (a) Brief the role of respiratory pigments in transport of carbon dioxide.

Or

- (b) What is oxygen tension? How did it is affecting respiration?

13. (a) Narrate the structure and functions of nervous system.

Or

- (b) Discuss the various growth hormones and its role on moulting process.

14. (a) Give an account on Lunar Periodicity.

Or

- (b) Discuss on various chromatophores and their role in colour changes.

15. (a) Explain the mode of elimination of nitrogenous wastes.

Or

- (b) What is excretion? Give an account on nitrogen excretion.

**Part C**

(3 × 10 = 30)

Answer any **three** questions.

16. Describe the food and feeding mechanism of shrimp *Penaeus monodon*.
  17. Write an essay on aquatic respiratory mechanism.
  18. Discuss various types of sense organs and their functions.
  19. Elaborate the role of glands and organs involving in bioluminescence.
  20. Describe the reproductive behaviour of marine fish.
-

**F-7203**

**Sub. Code**

**7BMB3C1**

**B.Sc. DEGREE EXAMINATION, APRIL 2022**

**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. Nucleus
2. Cholesterol
3. S-Phase
4. Anaphase-II
5.  $\alpha$  -helix
6. DNA
7. Histones
8. Chromatin
9. Metaphase
10. AUG

**Part B**

(5 × 5 = 25)

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

11. (a) Describe the structure of eukaryotic cell.

Or

- (b) Discuss the mechanism of transport of solutes.

12. (a) Comment on Insulin receptor.

Or

- (b) Explain the stages of meiosis-I.

13. (a) Describe the Meselson-stahl experiment.

Or

- (b) Distinguish the different forms of DNA.

14. (a) Write a short note on the RNA.

Or

- (b) Describe the structure and function of gene.

15. (a) Explain the structure of chromosomes.

Or

- (b) Sketch the cytoplasmic inclusions at ultra structure level.

**Part C**

(3 × 10 = 30)

Answer any **three** questions.

16. Comment on :

(a) Golgi apparatus,

(b) Peroxisomes

(c) Microtubules.

17. Discuss the various mechanisms of programmed cell death.
  18. Outline the different structural transformation in protein.
  19. Discuss the importance of genetic engineering in marine organizations.
  20. Give a detailed account on mechanism of translation.
-

**F-7204**

**Sub. Code**

**7BMB4C1**

**B.Sc. DEGREE EXAMINATION, APRIL 2022.**

**Fourth Semester**

**Marine Biology**

**ENVIRONMENTAL BIOLOGY**

**(CBCS – 2017 onwards)**

**Time : 3 Hours**

**Maximum : 75 Marks**

**Part A**

**(10 × 2 = 20)**

Answer **all** questions.

1. Define ecosystem.
2. Define food web.
3. What is alien species?
4. What is ecological succession?
5. Define estuary.
6. Write a note taiga ecosystem.
7. What is weathering?
8. Define Biogeochemistry.
9. What is pollutant?
10. Define climate change.

**Part B**

(5 × 5 = 25)

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

11. (a) What are the factors influence the ecosystem stability?

Or

- (b) Write a brief note on Ecological pyramids.

12. (a) Write note on Mono and Polyclimax with example.

Or

- (b) Why we do fish tagging and its uses?

13. (a) What is fresh water habitat and write not on its different types?

Or

- (b) Write note on coral ecosystem and its importance.

14. (a) Write short note on Carbon cycle.

Or

- (b) What are the essential elements and its importance in ecosystem?

15. (a) How marine life forms are affected by global warming?

Or

- (b) Write note on thermal pollution.

**Part C**

(3 × 10 = 30)

Answer any **three** questions.

16. Write a detail note on types of metabolites and its uses.
  17. Write an essay on community structure and succession.
  18. Explain different types habitat with example.
  19. Write a detail note on global warming and its impact on marine ecosystem.
  20. Write an essay on types marine pollution and it impact.
-

**F-7208**

**Sub. Code**

**7BMB6C1**

**B.Sc. DEGREE EXAMINATION, APRIL 2022.**

**Fifth Semester**

**Marine Biology**

**FISHERY BIOLOGY AND BIostatISTICS**

**(CBCS – 2017 onwards)**

Time : 3 Hours

Maximum : 75 Marks

**Part A**

(10 × 2 = 20)

Answer **all** questions.

1. Teleostei
2. Perciformes
3. *Lates calcarifer*
4. Sardine fishery
5. Fin lets
6. Fusiform body.
7. CPUE
8. Fishing effort
9. F test
10. Standard deviation

**Part B**

(5 × 5 = 25)

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

11. (a) Write about the general characteristic features of class *placodermi*.

Or

- (b) What are the morphological features of order scorpaeniformes?

12. (a) Describe about the commercial marine fin fish fisheries resources in Tamil Nadu.

Or

- (b) Explain about the elasmobranch fisheries resources in India.

13. (a) What are the different types of scales in fishes?

Or

- (b) Write a respiratory system in a fish with neat diagram.

14. (a) How do you assess the fisheries stock and recruitment?

Or

- (b) Explain about the survey of fish eggs and larvae.

15. (a) Explain the test of significance.

Or

- (b) Describe about one way and two way ANOVA.

**Part C**

(3 × 10 = 30)

Answer any **three** questions.

16. Describe about the Nelson's (1994) classification of fishes.
  17. Write about the present status of prawn fisheries in India.
  18. Write an essay on anatomy of fish with neat illustrations.
  19. Describe the fishing theory and principle of fishing.
  20. Write about the application of statistics in marine biology and fisheries.
-

**F-7209**

**Sub. Code**

**7BMB6C2**

**B.Sc. DEGREE EXAMINATION, APRIL 2022**

**Sixth Semester**

**Marine Biology**

**BIODIVERSITY AND CONSERVATION**

**(CBCS – 2017 onwards)**

Time : 3 Hours

Maximum : 75 Marks

**Part A**

(10 × 2 = 20)

Answer **all** questions.

1. Alpha diversity
2. Species evenness
3. Intertidal
4. Community diversity
5. Alien species
6. Habitat degradation
7. Amino acids
8. Flavonoids
9. Tetrodotoxin
10. Carotenoids

**Part B**

(5 × 5 = 25)

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

11. (a) Give an account on changes of biodiversity in time and space.

Or

- (b) Explain the needs for conservation of biodiversity.

12. (a) Describe the Genetic and Systematic diversity.

Or

- (b) Discuss the threatened and vulnerable species with examples.

13. (a) Elaborate the various ecosystem functioning.

Or

- (b) Discuss the values and uses of biodiversity.

14. (a) Explain the sources and importance of marine drugs.

Or

- (b) Give an account on various nitrogenous compounds.

15. (a) Elucidate on the types of toxins.

Or

- (b) Write a note on sterols of marine invertebrate.

**Part C**

(3 × 10 = 30)

Answer any **three** questions.

16. Write an essay on global and national level biodiversity.
  17. Describe on the biodiversity of coastal vegetation.
  18. Explain the various sources of alien species and their threats to biodiversity.
  19. Discuss the exploration of various antibiotic compounds from marine animals.
  20. Elucidate the functional properties of toxin and venom in marine animals.
-

**F-7210**

**Sub. Code**

**7BMBE3A**

**B.Sc. DEGREE EXAMINATION, APRIL 2022**

**Sixth Semester**

**Marine Biology**

**Elective : ENTREPRENEURSHIP DEVELOPMENT**

**(CBCS – 2017 onwards)**

Time : 3 Hours

Maximum : 75 Marks

**Part A**

(10 × 2 = 20)

Answer **all** questions.

1. What are the key concepts of entrepreneurship?
2. Brief note on factors influencing entrepreneurship?
3. List out the procedure to get Small Scale Industries License?
4. SIDCO stands for?
5. Define preference shares?
6. What are the types of private placement offerings?
7. Explain the fiscal.
8. What are the various type of incentives?
9. Explain the entrepreneurship status.
10. Describe about NIO and their functions.

**Part B**

(5 × 5 = 25)

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

11. (a) What is entrepreneur and its types?

Or

- (b) Write an note on qualities of an entrepreneur.

12. (a) List out the financial institutes in India.

Or

- (b) What is the role of small scale industries?

13. (a) What are the different types of NBFCs in India?

Or

- (b) List out the financial institutes in India.

14. (a) Explain the role of Women entrepreneurs.

Or

- (b) Write a note on Export Oriented Unit.

15. (a) Add a note on CIFE, FSI, and MPDEA.

Or

- (b) Give an brief notes on the status of shrimp seed production.

**Part C**

(3 × 10 = 30)

Answer any **three** questions.

16. What are advantages and disadvantages of entrepreneurship?

17. Functions of NSIC and SISI.

18. What are the sources of Finance?
  19. What are the prospects and problems in Women entrepreneurs?
  20. Explain about the raft culture for crab fattening, edible oyster cultivations.
-