

**RW-6041**

**462301**

**M.Sc. DEGREE EXAMINATION, NOVEMBER 2010**

**Marine Biology**

**REMOTE SENSING AND GIS**

(CBCS—2009 onwards)

Time : 3 Hours

Maximum : 75 Marks

**Part - A**

(10 × 2 = 20)

Answer **all** questions.

1. Aerial Photographs.
2. Stereoscopy.
3. Atmospheric windows.
4. Spectral reflectance.
5. Landsat MSS.

6. Seasat
7. Panchromatic.
8. Pixel.
9. Central meridian
10. DBMS.

**Part - B**

(5 × 5 = 25)

Answer **all** questions.

- 11 (a) Brief the applications of aerial photography in marine environment.

(Or)

(b) What is photo mosaics and its types.

12. (a) Elaborate EMR.

*(Or)*

(b) Explain the process of energy interactions in the atmosphere.

13 (a) Write note on altimetry.

*(Or)*

(b) Explain the role of INSAT series in meteorology

14 (a) Explain the IRS applications in coastal resources mapping.

*(Or)*

(b) Explain the applications of RS in geomorphologic studies.

15 (a) Explain RDBMS.

(Or)

(b) What is GIS and its role in marine system.

**Part - C** (3 × 10 = 30)

Answer any **three** questions.

16. Explain the fundamentals of aerial photography.

17. Write an essay on space platforms and their orbits and add note on Keplers laws of planetary motion.

18. Explain the sensors of Indian remote sensing satellites.
  
19. Elaborate the role of RS techniques in Oceanography.
  
20. Explain the projection parameters and add note on Projection transformation.

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**RW-6042**

**462302**

**M.Sc. DEGREE EXAMINATION, NOVEMBER 2010**

**Marine Biology**

**AQUACULTURE AND FISHERIES**

(CBCS—2009 onwards)

Time : 3 Hours

Maximum : 75 Marks

**Part - A**

(10 × 2 = 20)

Answer **all** questions.

1. Major fishing harbours in India.
2. Write short notes on pelagic fisheries.
3. Eggs and larvae.
4. Craft and Gear.

5. Spawning.
6. Pearl Oyster.
7. Induced breeding.
8. Larval rearing.
9. Finger lings.
10. Fin rot.

**Part - B**

(5 × 5 = 25)

Answer **all** questions.

- 11 (a) Give an account on marine fisheries scenario in India with special reference to capture fisheries.

*(Or)*

- (b) Write an essay on methods of survey for fishery assessment.

12. (a) Write an account on Sea ranching.

*(Or)*

- (b) Give an account on major methods involved in fish preservation and processing in India.



13 (a) Write a short note on marine ornamental aquaculture.

(Or)

(b) Describe the mass production prawn of seed.

14 (a) Write about the economic importance of lobster and scope for fattening.

(Or)

(b) Write a note on Pond culture of fin fishes.

15 (a) Write a note on Polyculture.

(Or)

(b) Describe the common diseases in aquatic organisms.

**Part - C**

(3 × 10 = 30)

Answer any **three** questions.

16. Write notes on different types of fishery resources.
  
17. Write an essay about Fish Processing and Marketing.
  
18. Explain the current scenario of cultivable fin and shell fishes.
  
19. How to setup an fin fish hatchery ?
  
20. Explain in detail about the causes, symptoms, treatment and control measures of bacterial and fungal diseases in fishes.

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**RW-6043**

**462303**

**M.Sc. DEGREE EXAMINATION, NOVEMBER 2010**

**Marine Biology**

**ANIMAL PHYSIOLOGY**

(CBCS—2009 onwards)

Time : 3 Hours

Maximum : 75 Marks

**Part - A**

(10 × 2 = 20)

Answer **all** questions.

1. Hormones.
2. Glycosuria.
3. Ureotelic.
4. Stenohaline.

5. Aestivation.
6. Lunar rhythm.
7. Poikilotherms.
8. Rods and cones.
9. Tropism.
10. Kymograph.

**Part - B**

(5 × 5 = 25)

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

- 11 (a) Give an account on the process of carbohydrate digestion in human.

(Or)

(b) Write a short notes on Absorption of protein, carbohydrate and lipid.

12. (a) Give an account of respiratory pigments.

*(Or)*

(b) Classify the animals on the basis on type of excretory products.

13 (a) What are homeotherms ? Explain how they regulate their body temperature.

*(Or)*

(b) Explain the process of osmoregulation in reptiles.

14 (a) Comment on the role of parasympathetic nervous system.

(Or)

(b) Explain the mechanism of muscle contraction.

15 (a) What is reflex action ?

(Or)

(b) Define chronobiology and write notes on its biological value.

**Part - C** (3 × 10 = 30)

Answer any **three** questions.

16. Describe protein and lipid metabolism.

17. Draw and define the structure of nephron and write a note on urine formation.
  
18. Write an account on Thermoregulatory mechanisms in animals.
  
19. Comment on the physiology of muscle contraction and its molecular structure.
  
20. Write an essay on Biological rhythms and its influence on animal behaviour and reproduction.

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**RW-6044**

**462503**

**M.Sc. DEGREE EXAMINATION, NOVEMBER 2010**

**Marine Biology**

**Elective—COASTAL ZONE MANAGEMENT**

(CBCS—2009 onwards)

Time : 3 Hours

Maximum : 75 Marks

**Part - A**

(10 × 2 = 20)

Answer **all** questions.

1. Estuary.
2. Atolls.
3. Biosphere Reserves.
4. National parks.
5. Territorial sea.



6. Continental shelf.
7. Seawater intrusion.
8. EEZ.
9. Bioshields.
10. FAO.

**Part - B**

(5 × 5 = 25)

Answer **all** questions.

11. (a) Brief about the major estuaries of the country.

(Or)

(b) Write an essay on major Oceans.

12. (a) What are the protected landscapes and seascapes ?

*(Or)*

(b) Write an essay on marine sanctuaries.

13. (a) Write short note on endangered marine organisms.

*(Or)*

(b) Elaborate the fishery potential of Indian EEZ.

14. (a) Explain the impacts of sea level change on coastal ecosystems.

*(Or)*

(b) Elaborate the impacts of tsunami on the marine resources of India.

15. (a) Explain UNESCO, UNDP, SIDA and their role in Ocean management

*(Or)*

(b) CZR notification - Elaborate.

**Part - C**

(3 × 10 = 30)

Answer any **three** questions.

16. Write an essay on coastal zone management and its importance
  
17. Explain the global biodiversity estimates.
  
18. What do you know about profitable vessel management and add note on marine fishery export?
  
19. Explain various coastal protection structures.
  
20. Write an essay on Geneva Convention and Regional Seas Programmes.

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**RW-6045**

**462702**

**M.Sc. DEGREE EXAMINATION, NOVEMBER 2010**

**Marine Biology**

**I/D : MARINE BIOTECHNOLOGY**

(CBCS—2009 onwards)

Time : 3 Hours

Maximum : 75 Marks

**Part - A**

(10 × 2 = 20)

Answer **all** questions.

1. Bioaugmentation.
2. DNA.
3. Chemostat.
4. Bio-reactor.
5. Foulers.

6. Chlorination.
7. Genomics.
8. DNA Microarray.
9. Cryopreservation.
10. Prebiotics.

**Part - B**

(5 × 5 = 25)

Answer **all** questions.

- 11 (a) Bring out the physicho-chemical characteristics of ballast water.

*(Or)*

(b) What are biosensors ? How are they used in pollution monitoring ?

12. (a) Discuss any two types of fermentation processes.

*(Or)*

(b) Explain the technique of immobilizing enzymes.

13 (a) Write a short note on the impact of fouling on marine resources.

*(Or)*

(b) Give a brief account on antifouling agents.

14 (a) How will you prepare cDNA library ?

(Or)

(b) Explain BAC library.

15 (a) Distinguish Prebiotics and Probiotics.

(Or)

(b) Explore the halophilic herbal resources along the Tamilnadu coast.

**Part - C**

(3 × 10 = 30)

Answer any **three** questions.

16. Write an essay on the application of biotechnology in waste water treatment.



17. Describe different types of bioreactors.
  
18. Discuss different remedial measures for antifouling.
  
19. Explain gene sequencing methods.
  
20. Describe the strategy for the production of transgenic fish.

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