

R6693

Sub. Code

461201

M.Sc. DEGREE EXAMINATION, APRIL – 2022

Second Semester

Oceanography & CAS

MARINE ECOLOGY AND ZOOGEOGRAPHY

(CBCS – 2019 onwards)

Time : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** questions.

All questions carry equal marks.

Each answer should be in about 10 words.

1. Temperature
2. Food-chain
3. Interstitial fauna
4. Nutrients
5. Sex-ratio
6. Dispersal
7. Niche
8. Epizoism
9. Biodiversity
10. Pollution

Part B

(5 × 5 = 25)

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

All questions carry equal marks

Each answer should be in about 500 words

11. (a) Describe the adaptations of benthos.

Or

- (b) Discuss the important ecological factors.

12. (a) Explain briefly the food -web in a marine ecosystem.

Or

- (b) Expound the ecological pyramid.

13. (a) Write note on the population density variations.

Or

- (b) Note down the role of density dependent factors of a population.

14. (a) Discuss the diversity and stability of marine environment.

Or

- (b) Write briefly the marine fouling and boring community.

15. (a) Comment on the importance of marine biodiversity.

Or

- (b) Describe the alien species.

Part C

(3 × 10 = 30)

Answer any **three** questions.

16. Write a detailed account on the pelagic environment.
 17. Expound the concept, structure and function of marine ecosystem.
 18. Describe the prey- predator relationship.
 19. Expound animal association in the marine environment.
 20. Describe the major threats to marine biodiversity.
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461202

M.Sc. DEGREE EXAMINATION, APRIL – 2022

Second Semester

Oceanography and CAS

MARINE POLLUTION, ENVIRONMENT AND HEALTH

(CBCS – 2019 onwards)

Time : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** questions.

All questions carry equal marks

1. Note on Oxygen minimum?
2. Write any two impact of Thermal pollution.
3. Classify marine pollutants based on their source.
4. Note on red tide impact?
5. What is organic pollution?
6. Define bioindicators?
7. Comment on pollution aspect of Cd, Zn.
8. What is radioactive pollution and give example.
9. Explain about the Phoresis.
10. What is a parasitism relationship in the ocean?

Part B

(5 × 5 = 25)

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

11. (a) Write note on pollutants and its classification.

Or

- (b) Write detail note on COD, DO.

12. (a) Write a note on sewage pollution.

Or

- (b) Explain about thermal pollution.

13. (a) Write note on pesticide inputs and its fate in the sea.

Or

- (b) Write a note on method to minimize pesticide pollution.

14. (a) Comment on metal pollution related disease.

Or

- (b) Describe about beneficial aspect of radiation and food safety.

15. (a) How do we select indicator organism.

Or

- (b) Comment on Bio- remediation.

Part C

(3 × 10 = 30)

Answer any **three** questions.

16. What are the major impacts of marine pollutants on marine organism.

17. Write detail note on current pollution status of Indian and Pacific ocean.

18. Describe in detail about major accidental oil spills and its consequences?
 19. Explain in detail about present status of coastal pollution in India and ecological impact?
 20. Describe about national and international agencies involved in ocean management?
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Sub. Code

461203

**M.Sc. Oceanography & CAS DEGREE EXAMINATION,
APRIL – 2022**

Second Semester

**APPLICATIONS OF REMOTE SENSING AND GIS IN
OCEANOGRAPHY**

(CBCS – 2019 onwards)

Time : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** questions.

1. Define passive remote sensing.
2. What is stratosphere?
3. Define absorption and Transmission.
4. Define photogrammetry.
5. Note on thermal image.
6. Name few image processing software.
7. What are the uses of Landsat imagery?
8. Define Seasat.
9. Note on ground control point.
10. What are the types of DEM?

Part B

(5 × 5 = 25)

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

11. (a) Write a note on ocean science satellites.

Or

- (b) Write a note on electromagnetic spectrum.

12. (a) Explain the types of sensors.

Or

- (b) Write a note on types of platforms.

13. (a) Explain the microwave sensing.

Or

- (b) Write a note on elements of Visual Image Interpretation.

14. (a) Write a note on NOAA and EROS and its applications.

Or

- (b) Describe in detail about Global Positioning System.

15. (a) Explain the Components of GIS.

Or

- (b) Application of GIS in resource management

Part C

(3 × 10 = 30)

Answer any **three** questions.

16. Write an essay on remote sensing and its applications.

17. Write an essay on Aerial photogrammetry.

18. Explain the principles of landforms structures.
19. Write an essay landsat series satellites.
20. Write a note on Digital Image Classification.

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461501

M.Sc. DEGREE EXAMINATION, APRIL – 2022

Second Semester

Oceanography And CAS

MARINE BIODIVERSITY AND CONSERVATION

(CBCS – 2019 onwards)

Time : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** questions.

1. Shannon-Weiner Index?
2. What does UNCLOS stand for and its objectives?
3. Describe Restoration Ecology. Give examples.
4. Great Barrier Reef and its importance.
5. Define Coastal afforestation.
6. What are non-renewable marine resources? Cite examples.
7. Why should we preserve mangroves?
8. What are the reasons for depletion of fish stock in-shore waters?
9. In-situ conservation of pearl oysters.
10. Endangered species

Part B

(5 × 5 = 25)

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

11. (a) What do you mean by species extinction? Add a note on the mitigative measures for the same.

Or

- (b) Describe the values of Marine biodiversity.

12. (a) How will you legally indulge yourself in marine conservation? Mention a few laws and treaties involved.

Or

- (b) How to protect marine life? Mention all the legal aspects tending to acts and conferences related to marine life protection.

13. (a) Write notes on the taxonomic and Phylogenetic diversity.

Or

- (b) Describe Species diversity and richness with suitable examples.

14. (a) Write notes on the significance of coastal and marine environments.

Or

- (b) Write notes on the exotic and indigenous species in marine environment.

15. (a) Describe Intertidal Biogeographic Provinces. What are the local and regional factors shaping fish assemblages?

Or

- (b) What do you understand by ecologically sustainable grazing? How is it related to conservation of marine environment?

Part C

(3 × 10 = 30)

Answer any **three** questions.

16. Write an essay on the present status and challenges of Marine Biodiversity in India.
17. What is National Biodiversity Authority? Write about the clauses of National Biodiversity Act
18. Describe the roles and responsibilities of conservation biologist in maintaining sustainable biodiversity.
19. Write an essay on various Marine Protected Areas in India? Add a note on their conservations strategies
20. Describe various impediments in conservation of marine biodiversity.

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461401

M.Sc. DEGREE EXAMINATION, APRIL – 2022

Fourth Semester

Oceanography and CAS

RESEARCH METHODOLOGY

(CBCS – 2019 onwards)

Time : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** questions. All questions carry equal marks

1. Define diatoms.
2. Write notes on Shell fish.
3. Define focal length.
4. Define embedding.
5. Short notes on diffraction.
6. Define cDNA.
7. Define skewness.
8. What is ANOVA.
9. Write notes on research abstract.
10. Short note on histogram.

Part B

(5 × 5 = 25)

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

11. (a) Brief note on Morphometric and Meristic character.

Or

- (b) Write note on ecological importance diatoms.

12. (a) Describe principles and applications of Scanning and Electron Microscope.

Or

- (b) Explain detail about importance of histological study.

13. (a) Write note on principles and applications of Mass spectrometer.

Or

- (b) Write a note on electrophoresis with principle and application.

14. (a) Describe detail account on regression and ANOVA.

Or

- (b) Describe about data analysis.

15. (a) Note on literature survey.

Or

- (b) How do you write a research abstract.

Part C

(3 × 10 = 30)

Answer any **three** questions.

16. Explain in detail about assessing primary productivity.
17. Write an essay on different types of microscope and its applications.

18. Write an essay on chromatography.
 19. Describe in detail about biological data bases.
 20. Write detail note on research manuscript preparation.
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