

FIRST SEMESTER P.G. DEGREE EXAMINATION, NOVEMBER 2021

(CCSS)

Environmental Sciences

ESW 1C 04—ENVIRONMENTAL POLLUTION AND WASTE MANAGEMENT

(2019 Admissions)

Time : Three Hours

Maximum : 80 Marks

Section A (Essays)Explain any *two* of the following questions. Each question carries 10 marks :

1. Write an essay on trans-boundary air pollution and Meteorological factors affecting air pollutants
2. Explain the various steps involved in Municipal Solid Waste Management.
3. Write an essay on Environmental Pollution.

(2 × 10 = 20 marks)

Section B (Short Answer Questions)Explain any *eight* of the following questions. Each question carries 5 marks :

4. Explain the steps in Waste Water Treatment.
5. What is the Environmental Impact of Municipal Solid Waste ?
6. Explain various Air Quality Monitoring techniques.
7. Explain Soil forming process.
8. What are the categories of Solid Waste ?
9. Give an account of classification of types of Soil with reference to India.
10. Give an account of Persistent Organic Pollutants (POP's).
11. Explain physico - chemical characteristics of Soil.
12. Give an account of Agrochemical pollutants.
13. Explain why water is considered as a scarce natural resource.

(8 × 5 = 40 marks)

Section C (Very Short Answer Questions)

Answer any *ten* questions. Each question carries 2 marks :

14. Write a short note on Nuclear Waste.
15. Macro and Micro Pollutants in Soil.
16. What is Photochemical Smog ? Write.
17. List out major Gaseous Air pollutants.
18. Chemistry of Ozone layer.
19. What is BOD ?
20. Difference between primary and secondary air pollutants.
21. Write short note on PCB's.
22. What are Radionuclides ?
23. What are Oxygen Demanding Wastes ? Give examples.
24. What are the Physical and Chemical Properties of Water ?
25. Give an account of Light pollution.

(10 × 2 = 20 marks)

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ESW 1C 02—PHYSICAL PROCESSES IN THE ENVIRONMENT

(2019 Admissions)

Time : Three Hours

Maximum : 80 Marks

Part A (Essays)*Answer any two out of the following three questions.**10 marks each.*

1. Enumerate in detail various earth systems and explain their interlinkages.
2. Write an essay on the history, development and evolution of earth systems.
3. Explain the causes and effects of Climate Change.

(2 × 10 = 20 marks)

Part B (Short Answers)*Answer any eight out of the following ten questions.**5 marks each.*

4. Discuss on the different processes involved in deep-sea circulation.
5. Differentiate between potential temperature and virtual temperature.
6. What is a stream hydrograph ? What is its utility ?
7. Write a short note on the Rock Cycle with sketches.
8. Explain the adiabatic processes involved in meteorology.
9. How are clouds formed ?
10. Write a note on the different groundwater storage systems.
11. What are the different processes of metamorphism in rocks ?
12. Detail on the different global wind systems.
13. Role of atmospheric boundary layer in dispersion of pollutants ?

(8 × 5 = 40 marks)

Turn over

Part C (Very Short Answers)

*Answer any ten out of the following twelve questions.
2 marks each.*

14. Atmospheric scattering.
15. SALR.
16. Cirrus.
17. Lithosphere.
18. Stream flow.
19. Temperature profile of the ocean.
20. Aerosol.
21. Climatic zones of the world.
22. Sial and Sima.
23. Continental drift.
24. Geomagnetism.
25. Gutenberg discontinuity.

(10 × 2 = 20 marks)

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Environmental Sciences

ESW 1C 01—FUNDAMENTALS OF ECOLOGY AND ENVIRONMENT

(2019 Admissions)

Time : Three Hours

Maximum : 80 Marks

Section A (Essays)*Explain any two of the following questions.**Each question carries 10 marks.*

1. Write an essay on Environmental Factors.
2. Explain the various Components of the Environment.
3. Discuss Biogeochemical Cycles with neat diagrams.

(2 × 10 = 20 marks)

Section B (Short Answer Questions)*Explain any eight of the following questions.**Each question carries 5 marks.*

4. Explain the distribution of Water Globally.
5. Explain Pyramid of Energy.
6. Explain the measures adopted for Soil Conservation.
7. Explain the Components of Ecosystem.
8. Explain the interrelationship of Ecology with other disciplines.
9. Give an account of Primary Production.
10. Explain Process of Soil formation.
11. Define Ecosystem with examples.
12. Give an account of Ecological Indicators with examples.
13. Give an account of Edaphic factors.

(8 × 5 = 40 marks)

Turn over

Section C (Very Short Answer Questions)

*Answer any ten questions.
Each question carries 2 marks.*

14. List out the major Population Characteristics.
15. How Energy flows in an Ecosystem ?
16. What is Ecological Dominance ?
17. Write a short note on Detritus Food Chain.
18. Give an account of Commensalism.
19. What is Ecotone ?
20. What is meant by Interspecific Interactions ?
21. Write a short note on Species Diversity.
22. What is Edge effect ?
23. Importance of Environmental Science.
24. What is Ecological Equivalence ?
25. Write a note on Malthus Theory.

(10 × 2 = 20 marks)