

R13

Code No: 114CW

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

B. Tech II Year II Semester Examinations, February -2024

ENVIRONMENTAL STUDIES

(Common to CE, ECE, CSE)

Time: 3 hours

Max. Marks: 75

Note: i) Question paper consists of Part A, Part B.

ii) Part A is compulsory, which carries 25 marks. In Part A, answer all questions.

iii) In Part B, Answer any one question from each unit. Each question carries 10 marks and may have a, b as sub questions.

PART - A

(25 Marks)

- 1.a) What is food chain? Mention the role of food chain in an ecosystem. [2]
- b) Define ecosystem. Mention the importance of 'keystone' species in an ecosystem. [3]
- c) What are the reasons for floods? How floods are prevented? [2]
- d) What are renewable energy sources? Mention the benefits and limitations of renewable energy sources. [3]
- e) What are the legal features and rules framed in National Biodiversity act? [2]
- f) What is species diversity? Highlight the causes for degradation of species diversity. [3]
- g) Define Primary and secondary air pollutants. Mention the health hazards of each pollutant. [2]
- h) What is bioremediation? Mention the advantages and technical challenges in bioremediation process. [3]
- i) What are the sources of biomedical wastes? Summarize the methods to handle biomedical wastes. [2]
- j) Define Green building. How it improves the human health and environment quality? [3]

PART - B

(50 Marks)

- 2.a) Discuss the structure and functions of forest ecosystem and desert ecosystem. [7+3]
 - b) Explain the importance of environmental studies. [7+3]
- OR**
- 3.a) What is ecological pyramid? Explain the relationship between the different living organisms at different trophic levels.
 - b) Discuss the steps in "water cycle" process in an ecosystem. [5+5]
- 4.a) Discuss the health hazards and environmental impacts of extracting mineral resources.
 - b) Discuss the causes and environmental impacts of deforestation. [5+5]
- OR**
- 5.a) Explain the reasons for overutilization of ground water and surface water. Mention the impacts of overutilization on human life.
 - b) What are non – renewable energy sources? Mention the advantages and disadvantages. [7+3]

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6.a) Explain the importance of genetic diversity and ecosystem diversity for sustained life. Mention the causes for the loss of genetic diversity and ecosystem diversity.

b) Define “hot spots” of biodiversity. What are the threats to biodiversity? [7+3]

OR

7.a) Explain the various social values and aesthetic values of biodiversity.

b) What are the reasons for man-wildlife conflicts? Suggest the practices to prevent man-wildlife conflicts? [6+4]

8.a) Explain the recommended values for “ambient air quality standards” and “drinking water quality standards”.

b) What are ozone depleting substances (ODS)? Give examples and explain how it affects ozone layer? [6+4]

OR

9.a) Explain the sources, health concerns and environmental hazards of noise pollution.

b) What are the objectives and recommendations of Montréal Protocol? [6+4]

10.a) Discuss the rules and techniques for handling hazardous chemical wastes.

b) Discuss the steps in Environmental Management Plan (EMP). Mention the importance of EMP. [5+5]

OR

11.a) Explain the role of Urban sprawl in environmental pollution issues.

b) Discuss the legal aspects and pollution prevention rules in Air (Prevention and Control of Pollution) Act. [5+5]

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