

**M.SC. CHEMISTRY
FOURTH SEMESTER
RAISING RURAL AWARENESS-
CHEMICAL HAZARDS IN SOIL & WATER**

**SET
B**

MSC – 405 [CCEC]

[USE OMR FOR OBJECTIVE PART]

Duration: 1:30 hrs.

Full Marks: 35

Time: 15mins.

(Objective)

Marks: 10

Choose the correct answer from the following:

1×10=10

- Which of the following strategies is NOT typically used to remediate contaminated soil and water?
 - Phytoremediation
 - Bioremediation
 - Incineration
 - Desalination
- Which of the following is a effective Water Remediation Technique ?
 - Bioremediation
 - Reverse osmosis
 - Accelerate the process
 - None of the above
- Which of these pollutants is an insecticide?
 - Pyrethrum
 - Aliphatic acids
 - Thiocarbamates
 - Amides
- The environment protection act was enacted in -
 - 1986
 - 1985
 - 1984
 - 1981
- Which of the following is a commonly found heavy metal contaminant in soil?
 - Lead
 - Nitrate
 - Organic pesticides
 - Chlorine
- The full form of BOD is -
 - Biological Oxygen Demand
 - Biometric Oxygen Demand
 - Biochemical Oxygen Demand
 - Biological Oxygen Deep Water
- The Minamata disease is related to -
 - Hg poisoning
 - Cd poisoning
 - As poisoning
 - None of the above
- Which of the following methods is used to remediate chemically contaminated soil?
 - Soil washing
 - Composting
 - Deforestation
 - Crop rotation

9. Which type of plastic is commonly used in packaging and contributes to marine pollution?
- a. PET
 - b. PLA
 - c. PVC
 - d. PBS
10. Which of the following chemicals is related to Bhopal gas tragedy?
- a. Methyl isocyanate
 - b. Ethyl isocyaante
 - c. Chlorine
 - d. None of the above
- - - - -

(Descriptive)

Time : 1 hr. 15 mins.

Marks : 25

[Answer question no.1 & any two (2) from the rest]

1. a. What are the main sources of contamination for soil and water in rural areas? 2+3=5
b. Give three examples of incidents that caused the contamination of soil and water in the past.

2. a. How does contaminated soil and water affect human health? 3+3+2+2
=10
b. What methods are available for remediation of the contaminated water?
c. What is the connection between PAHs and soil pollution?
d. What are the economic implications of soil and water contamination?

3. a. What steps can be taken to prevent future contamination of soil and water in an area? 4+4+2
=10
b. How does agricultural activity contribute to chemical contamination in rural soil and water?
c. What happens when ecosystem is disrupted?

4. a. What are the long-term effects of exposure to chemical hazards in rural environment? 5+2+3
=10
b. What is biomagnification?
c. How does contaminated soil and water affect ecosystems?

5. a. How can community engagement contribute to the success of soil and water contamination remediation efforts? $3+3+2+2=10$
- b. What role can digital connectivity play in effective communication and outreach efforts for soil and water contamination remediation in rural areas?
- c. What is the effect of heavy metal toxicity in human health?
- d. Why is it important to incorporate local knowledge and cultural perspectives into communication materials for chemical hazards awareness?

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