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SECTION 'C'

12×4=48

(Long Answer Type Questions)

**Note** : Answer the following questions in 500 words.

1. Discuss the vertical profile of atmosphere and explain atmospheric composition.

Or

Write note on acid rain.

2. How pesticides endanger our life ? Explain.

Or

Describe the microbial contamination in water.

3. Write note on cement and sugar industries.

Or

How will you define magnesium of soil ? Determine it in a soil sample.

4. Write the advantages of gaseous fuel and discuss water gas.

Or

Explain the ultimate analysis of coal.

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Roll No.....

**M.Sc. III Semester Examination, April-2021**

**CHEMISTRY**

**Paper IV**

(Environmental and Analytical Chemistry)

Time : 3 Hours ]

[Maximum Marks : 80

**Note** : All questions are compulsory. Question Paper comprises of 3 sections. **Section A** is objective type/Multiple Choice questions with no internal choice. **Section B** is short answer type with internal choice. **Section C** is long answer type with internal choice.

SECTION 'A'

1×8=8

(Multiple Type Questions)

Choose the correct answer :

1. In the absence of greenhouse gases in the atmosphere, the earth's mean temperature would drop to about :
- (a) 0°C (b) 10°C  
(c) -20°C (d) -10°C
2. Chlorofluorocarbon releases a chemical harmful to ozone is :
- (a) Chlorine (b) Fluorine  
(c) Nitrogen peroxide (d) Sulphur dioxide.

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3. Which important greenhouse gas other than methane is being provided from the agriculture fields ?
- (a)  $\text{SO}_2$  (b)  $\text{N}_2\text{O}$   
(c)  $\text{SO}_3$  (d)  $\text{NH}_3$
4. Fluoride pollution in water mainly affects :
- (a) Kidney (b) Brain  
(c) Heart (d) Teeth
5. Dysentery spread due to :
- (a) Food adulteration (b) Humid weather  
(c) Water pollution (d) Air pollution
6. The waste materials that can be decomposed off by micro-organisms are called :
- (a) Non-degradable wastes (b) Toxic wastes  
(c) Degradable wastes (d) All of these
7. Calorific value is determined by :
- (a) UV-spectrophotometer (b) Flame photometer  
(c) Bomb Calorimeter (d) Nephelometer
8. The term 3'R is used for :
- (a) Eutrophication (b) Drug Analysis  
(c) Micronutrient in soil (d) Waste management.

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**SECTION 'B'** **4×6=24**  
(Short Answer Type Questions)

**Note :** Answer the following questions in 250 words.

1. What are the effects of ultraviolet radiations on human health.

Or

Write notes on :

- (a) Biogeochemical cycle of nitrogen,  
(b) Electrostatic precipitator.

2. Write note on water born diseases.

Or

What is the function of aeration tank in the treatment of sewage ?

3. Discuss the role of N, P, K in soil.

Or

How will you analyse soil moisture volumetrically ?

4. Write the characteristics of solid, liquid and gaseous fuel.

Or

Discuss the composition of blood and how will you preserve it ?

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P. T. O.