SECTION 'C'

 $12 \times 4 = 48$

(Long Answer Type Questions)

Note: Answer the following questions in 500 words.

1. Discuss the verticle 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.

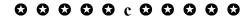
Or

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.



G-3/316/21

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
- Chlorofluorocarbon releases a chemical harmful to ozone is:
 - (a) Chlorine

- (b) Fluorine
- (c) Nitrogen peroxide
- (d) Sulphur dioxide.

3.	Which important greenhouse gas other than methane being provided from the agriculture fields?		
	(a)	SO_2	(b) N_2O

(c) SO₃

- (d) NH_3
- **4.** Fluoride pollution in water mainly affects:
 - (a) Kidney

(b) Brain

(c) Heart

- (d) Teeth
- **5.** Dysentry spread due to :
 - (a) Food adulteration
- (b) Humid weather
- (c) Water pollution
- (d) Air pollution
- **6.** The waste materials that can decomposed off by microorganisms 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.

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 an 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?