

R.N.G.PATEL INSTITUTE OF TECHNOLOGY-RNGPIT
(An Autonomous Institute U/s UGC Act 1956)

B.Voc. SEMESTER-I, SEMESTER END EXAMINATION – WINTER 2025

SUBJECT CODE: 1IC104

DATE: 19-12-2025

SUBJECT NAME: ENVIRONMENTAL CHEMISTRY

TIME: 11:00 AM to 01:00 PM

TOTAL MARKS: 50

Instructions

1. It is **compulsory** for students to write **Enrolment No. /Seat No.** on the question paper.
2. Attempt all questions in the question paper.
3. The figures to the right of each question indicate full marks. Make suitable assumptions with proper justification wherever required.
4. Simple, non-programmable scientific calculators are permitted.
5. BL - Cognitive Level (As per Revised Bloom's Taxonomy) (R-Remember, U-Understanding, A –Application, N –Analyze, E – Evaluate, C -Create), CO - Course Outcomes.

		Marks	BL	CO
Q.1	(a) List the key areas included in the scope of environmental chemistry.	05	R	1
	(b) Explain major components of environment.	05	U	1
Q.2	(a) List the major chemical components of the Earth's atmosphere.	05	R	2
	(b) Explain the layers of the earth's atmosphere and describe how each layer contributes to the overall functioning of the atmosphere.	05	U	2
OR				
Q.2	(a) List the major effects of the greenhouse effect.	05	R	2
	(b) Explain in detail about the formation of inorganic particulate matter.	05	U	2
Q.3	(a) State the type of hybridization in water (H ₂ O).	05	R	3
	(b) Explain in detail: Water cycle.	05	U	3
OR				
Q.3	(a) State the factors affecting the solubility of gases in water.	05	R	3
	(b) Explain the parameters of drinking water quality standards and discuss how they ensure the safety of water for human consumption.	05	U	3

Q.4	(a)	Apply the concept of soil pH to suggest ways for improving agricultural productivity and plant growth.	05	A	4
	(b)	Explain the processes of sorption and precipitation so as to enable soils to remove pollutants from wastewater.	05	U	4
OR					
Q.4	(a)	Apply the principles of soil chemistry to address issues related to soil fertility and crop productivity.	05	A	4
	(b)	Describe the types of lithospheres and explain their importance.	05	U	4
Q.5	(a)	State the ambient air quality standard.	05	R	5
	(b)	Apply the concepts of recycling and reuse to develop methods for effective wastewater management.	05	A	5
OR					
Q.5	(a)	List the effects and control measures of water pollution.	05	R	5
	(b)	Apply the working principle of any one air pollution control equipment to demonstrate how it helps in reducing air pollutants.	05	A	5
