

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

B. Voc. SEMESTER-I, SEMESTER END EXAMINATION - WINTER 2024

Subject Code: 1IC101

Date: 17-12-2024

Subject Name: CONCEPT IN 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 - Bloom's Taxonomy Levels (R-Remember, U-Understanding, A-Application, N-Analyze, E-Evaluate, C-Create), CO - Course Outcomes.

	Marks	BL	CO
Q.1 Objective-Type Questions			
	[05]		
(a) _____ was created by Dmitri Mendeleev (1834-1907).	1	R	1
(i) Modern atomic theory			(ii) Elements
(iii) The periodic table			(iv) Chemical notation
(b) _____ has a positive charge.	1	R	2
(i) Electron			(ii) Proton
(iii) Neutron			(iv) Anions
(c) _____ is not an inert gas.	1	R	3
(i) Neon			(ii) Helium
(iii) Hydrogen			(iv) Radon
(d) _____ is the neutral value of the pH scale.	1	R	4
(i) Less than 3			(ii) Equal to 7
(iii) Less than 10			(iv) More than 10
(e) _____ type of coal has the highest carbon content.	1	R	5
(i) Lignite			(ii) Anthracite
(iii) Peat			(iv) Bituminous

Q.2 Attempt Any Three	[15]		
(a) Explain chemistry and its branches.	5	U	1
(b) Explain the importance of chemistry in everyday life.	5	U	1
(c) Explain Bohr's atomic model.	5	U	2
(d) Explain Rutherford atomic model.	5	U	2
Q.3 Attempt Any Three	[15]		
(a) Explain covalent bonds and its properties.	5	U	3
(b) Explain ionization energy.	5	U	3
(c) Discuss the difference between soft water and hard water.	5	U	4
(d) Discuss the formation of scale and sludge in boiler and write about its prevention.	5	U	4
Q.4 Attempt Any Three	[15]		
(a) Discuss ion-exchange method for softening of water.	5	A	4
(b) Explain the composition, properties and applications of natural gas.	5	A	5
(c) Discuss about fuel and its classification.	5	R	5
(d) Explain the fractional distillation of crude oil and list the various liquid fuel obtained with properties and uses.	5	R	5
