

International Islamic University Chittagong

Department of Computer Science & Engineering

B. Sc. in CSE, Mid Term Examination, Spring-2025

Course Code:CHEM- 2301 Course Title: Chemistry

Total marks: 30 Time: 1 hours 30 minutes

[Answer *all* the questions. Figures in the right hand margin indicate full marks.]

Bloom's Levels of the Questions

Letter Symbols	R	Un	Ap	An	E	C
Meaning	Remember	Understand	Apply	Analyze	Evaluate	Create

			BT	Mark s
1.	a)	Write down the modern periodic law and mention some properties of modern periodic table. Discuss the classification of elements based on electronic configurations with examples.	R/Un	2+3
1.	b)	"Electronic Configuration of the elements is the basis of the Periodic Table"- explain.	An	2
1.	c)	What is electronegativity? Why Fluorine (F) has the highest electronegativity?	R/Un	1+2
OR				
1.	a)	What is quantum number? Mention four quantum numbers with their significance.	R/Un	1+2
1.	b)	Determine position of the following elements in the periodic table. (i) Cu ₂₉ (ii) Br ₃₅	Ap	2
1.	c)	Compare Rutherford's Model with Bohr's Model. Which model is more acceptable and why? Mention with their figures.	An	2+3
2.	a)	What do you mean by Coordination covalent bond? Explain with an example.	Un	2
2.	b)	Analyze and show clearly- the bond formation in NaCl.	An	3
2.	c)	Explain Hybridisation process in BeCl ₂ & H ₂ O. Mention bond angle, structure.	Ap/ An	3+2
3.	a)	What is transition Elements? Explain why all d-block elements aren't transition elements but all transition elements are d-block elements?	R/Un	1+2
3.	b)	What do you mean by Lanthanides & Actinides contraction?	Un	2
3.	c)	What are the properties of transition elements? Explain briefly three of them.	R/An	2+3