



Daffodil International University
Department of Electrical and Electronic Engineering
Faculty of Engineering

Mid Term Examination, Summer – 2026

Course Code: 0531-121

Section: A, B

Full Marks: 25

Course Title: Chemistry

Level-Term: L1-T2

Exam Date: June 30, 2026

Teacher's Initial: AAA

Time: 1.5 Hours

- Q1. **Explain** the variation of atomic radius across a group and across a period with the definition of atomic radius. CO-1 5
C(2)
- Or
- Discuss** the terms ionization energy and electron affinity shortly and the reason of being the 1st ionization energy of O lower than that of N.
- Q2. (a) **State** the D-Broglie's wave particle duality equation. **Derive** the equation. CO-2 3
C(3)
- (b) Given that, frequency of a light spectrum is $5 \times 10^{10} \text{ sec}^{-1}$. **Calculate** the energy. CO-2 2
C(3)
- Q3. (a) **Define** Isobar and Isotone with examples. CO-1 2
C(1)
- (b) Given, $R_H = 109678 \text{ cm}^{-1}$. **Determine** the energy, wavelength and wave number of radiations emitted due to the electron transition from 7th energy shell to 2nd energy shell. CO-1 3
C(2)
- Q4. **Explain** metallic bond and the properties of metal. CO-3 5
C(2)
- Or
- Describe** covalent bond with some of its examples. **Discuss** the differences between sigma bond & pi bond.
- Q5. (a) **Define** Hydrogen bond. **Mention** the bonds water can have. CO-3 2
C(2)
- (b) Given, there are two isomers of an organic compound having different H-bonds. CO-3 3
C(2)
- Explain** the H-bonds present in O-nitrophenol & P-nitrophenol.