

## **MID SEMESTER EXAMINATION 2021-2022**

### **CHI 461: INSTRUMENTAL METHODS OF CHEMICAL ANALYSIS**

**Max Marks: 35**

**Attempt all questions and submit Part A and Part B on separate sheets**

#### **Part A**

1. Write down the difference between Flame Photometry and Atomic Absorption Spectroscopy. [5]
2. What is the effect of energy on population of atoms in different energy levels? [5]
3. Write down the basic equation used for Atomic fluorescence. Describe its parameters. [5]

#### **Part B**

4. Define chemical shift and discuss how it is measured. [5]
5. Give the ideal relative intensities for signals in NMR spectra by Pascal's triangle rule. [5]
6. What are the characteristics of the solvent and internal standard used in the NMR spectroscopy and name some solvents and internal standard that are used in NMR spectroscopy. [10]