

## School of Computing Science and Engineering

Bachelor of Technology in Computer Science and Engineering  
Semester End Examination - Jun 2024

Duration : 180 Minutes  
Max Marks : 100

### Sem IV - S1UB420B - Pharmaceutical Instrumentation

General Instructions

Answer to the specific question asked

Draw neat, labelled diagrams wherever necessary

Approved data hand books are allowed subject to verification by the Invigilator

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|-----|--|--------|
| 1)  | Which gas is used in GC?   | K1(2)  |
| 2)  | Relate What is the mechanism of quadrupole mass analyser                               | K2(4)  |
| 3)  | Describe objective lens and its application  | K2(6)  |
| 4)  | What is the use of NMR in drug discovery?  | K3(9)  |
| 5)  | Interpret the elemental analysis by AAS spectroscopy with example                      | K3(9)  |
| 6)  | Discuss the diagram of IR spectroscopy and their applications                          | K5(10) |
| 7)  | Describe how does the IR spectroscopy instrument work                                  | K4(12) |
| 8)  | Discuss which of the following detectors is commonly used in HPLC?                     | K5(15) |
| 9)  | Explain where do the protons in benzene appear in the H NMR spectrum?                  | K5(15) |
| 10) | Illustrate the concept of resolution and magnification of transfer electron microscope | K6(18) |