

Time: 2 ½ Hours

Marks - 60

- N.B.**
1. All questions are compulsory.
 2. Draw neat labeled diagrams wherever necessary.
 3. All questions carry equal marks.

- Q.1 a** Explain the principle and practice of TLC. Add a note on uses of TLC. **12**
- OR**
- Q.1 b** Illustratively elaborate on the principles underlying chromatographic separation. **12**
- Q.2 a** Give an account on normal and reverse phase HPLC. **12**
- OR**
- Q.2 b** Discuss in detail the principle and instrumentation of HPLC. **12**
- Q.3 a** Explain with suitable diagram, principle, Instrumentation and application of Gas chromatography. **12**
- OR**
- Q.3 b** Elaborate on different injection techniques used in GC systems. **12**
- Q.4 a** Describe Electromagnetic spectrum with examples. **12**
- OR**
- Q.4 b** Elaborate on UV-Visible spectrophotometer with suitable diagram. **12**
- Q.5** **Write Short note on the following (ANY THREE)** **12**
- a. Derivatisation in TLC
 - b. Criteria for Selection of Liquid Stationary Phase
 - c. Modification of stationary phase - endcapping
 - d. Turbidimetry
 - e. Application of AAS

-X-X-X-X-X-