

QP CODE: 302326

Reg. No: .....

**Third Year Pharm D Degree Supplementary Examinations  
January 2024**

**Pharmaceutical Analysis**

**Time: 3 Hours**

**Total Marks: 70**

- *Answer all questions to the point neatly and legibly • Do not leave any blank pages between answers • Indicate the question number correctly for the answer in the margin space*
- *Answer all parts of a single question together • Leave sufficient space between answers*
- *Draw Diagrams wherever necessary.*

**Essays**

**(3x10=30)**

1. Discuss the principle and methodology of ion exchange chromatography. Mention its applications.
2. Explain briefly about the construction and working principle of reference electrodes in potentiometric titrations and its application.
3. Explain the construction and working principle of UV detectors with a neat labeled diagram.

**Short notes**

**(8x5=40)**

4. Write a note on optical rotatory dispersion and circular dichroism.
5. Sampling techniques in IR spectroscopy.
6. Discuss the different currents in polarography.
7. Describe the construction and working principle of Hollow cathode lamp and its merits and demerits.
8. Explain the theory and procedure of DSC.
9. Explain the principle and working of paper electrophoresis.
10. Explain briefly about
  - a) Chemical shift
  - b) Coupling constant
11. Write in detail about the principle of fragmentation of ions in mass spectroscopy.

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