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**25-PC-24**

**M.Sc. II SEMESTER [MAIN/ATKT] EXAMINATION  
MAY - JUNE 2025**

**PHARMACEUTICAL CHEMISTRY**

Paper - IV

**[Pharmaceutical Analysis - II]**

*[Max. Marks : 75]*

*[Time : 3:00 Hrs.]*

*[Min. Marks : 26]*

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**Note :** Candidate should write his/her Roll Number at the prescribed space on the question paper.  
Student should not write anything on question paper.  
Attempt all five questions. Each question carries an internal choice.  
Each question carries **15 marks**.

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**Q. 1** Discuss principle, technique and applications of paper chromatography.

**OR**

Define Gas-liquid chromatography with applications in pharmaceutical analysis.

**Q. 2** Discuss following -

- i) Principle of Gel Chromatography.
- ii) Gel Preparation.
- iii) Applications of Gel Chromatography in Pharmaceutical Analysis.

**OR**

Write short note on the following -

- i) Cation and Anion exchangers with examples.
- ii) Principle of HPLC (High Performance Liquid Chromatography).

**Q. 3 a)** Explain principle of liquid - liquid extraction.

**b)** Discuss sequences of Extraction process.

**OR**

Write notes on the following -

- i) Continuous Extraction.
- ii) Soxhlet Extraction.
- iii) Stripping Extraction.

P.T.O.

**Q. 4** Describe the basic principle and method of determination of Dissolved Oxygen (DO) in water sample.

**OR**

How to determine Arsenic and Cadmium by Titrimetric method.

**Q. 5** What is Flame Photometry ? Discuss principle instrumentation and applications of flame photometry.

**OR**

Write short notes on following -

- i) Explain Nephelometry principle.
- ii) Applications of Nephelometry and Turbidimetry.

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