

**QP CODE: 302326**

**Reg. No: .....**

**Third Year Pharm D Degree Special Supplementary Examinations  
August 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. State and derive Beer – Lambert's Law. Write a note on limitations of Beer's Lamberts Law. (7+3)
2. With a neat diagram, explain the different parts and working of gas liquid chromatography.
3. Explain the construction, working, advantages and disadvantages of saturated calomel electrode. (3+3+2+2)

**Short notes**

**(8x5=40)**

4. Explain the interferences encountered in flame photometry.
5. Explain the principle and applications involved in NMR. (3+2)
6. Explain different types of acid-base conductometric titrations with suitable examples.
7. Explain the principle and instrumentation of paper electrophoresis.
8. Enumerate the factors affecting ion exchange chromatography.
9. Explain the difference between heat flux DSC and power compensated DSC.
10. Explain the difference between atomic absorption spectroscopy and atomic emission spectroscopy.
11. Classify and explain the types of columns used in HPLC.

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