

QP CODE: 302326

Reg. No:

**Third Year Pharm D Degree Supplementary Examinations
February 2023**

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. Write in detail about the Working Concept and Instrumentation of HPLC. Discuss about Various terms used in chromatographic analysis.
2. Explain the principle of IR. Discuss in detail about various vibrational transitions and frequencies in IR spectroscopy in a neat diagram.
3. Explain the theory and instrumentation of flame photometry.

Short notes

(8x5=40)

4. Briefly explain about column packing and elution techniques.
5. Write down the principle and separation of gel electrophoresis and its application
6. Write down the various types of electronic excitation process.
7. Explain the various types of ions produced in mass spectroscopy. Detail about it and mention its applications.
8. What is luminescence and its various types.
9. Write down the validation parameter during method development.
10. Write the various titration curves in conductometric titrations.
11. What is Bragg's law. Explain briefly about powder X-ray diffraction technique.
