

QP Code: 721006

Reg. No.....

**Seventh Semester B. Pharm Degree Supplementary Examinations
June 2023
Instrumental Methods of Analysis
(2017 Scheme)**

Time: 3 Hours

Max. Marks: 75

- *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

(2x10=20)

1. Explain the construction and working of a double beam UV spectrophotometer with the help of a neat diagram.
2. Explain the principle behind IR spectroscopy and the different stretching and bending vibrations.

Short Notes

(7x5=35)

3. Briefly explain what are the factors that affect intensity of fluorescence.
4. Explain the principle and types of resins employed in ion exchange chromatography.
5. Explain on the stationary and mobile phases used in gel chromatography.
6. Explain any two types of burners used in Flame Photometry.
7. What are the types of columns used in gas-liquid chromatography.
8. Explain the instrumentation setup of HPTLC.
9. Explain zone electrophoresis.

Answer Briefly

(10x2=20)

10. In fluorescence what is intersystem crossing.
11. Explain Isobestic point.
12. Explain flame atomizers.
13. Explain derivatization in Gas chromatography.
14. Give four examples of detectors used in gas-liquid chromatography.
15. Column efficiency.
16. Distinguish between guard column and analytical column.
17. State four applications of HPLC.
18. Mention two methods of detecting spots on a TLC plate.
19. What is the role of a ultrasonicator in HPLC.
