

QP Code: 721006

Reg. No.....

**Seventh Semester B. Pharm Degree Regular/Supplementary
Examinations February 2024
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 principle, instrumentation and applications of atomic absorption spectroscopy.
2. With the help of a schematic diagram, discuss the instrumentation of Gas Chromatography. Explain in detail the principle of thermal conductivity detector.

Short Notes

(7x5=35)

3. Enlist and explain the types of shifts observed in UV-spectrum with suitable examples.
4. Factors affecting fluorescence.
5. Write the principle of IR spectroscopy.
6. With the help of Van Deemter Equation, explain the factors affecting efficiency of a chromatographic separation.
7. Explain the development and detection techniques used in TLC.
8. What is derivatization in GC. Explain the types and methods of derivatization.
9. What is electrophoresis. Write the principle and procedure for Gel Electrophoresis.

Answer Briefly

(10x2=20)

10. What are the electronic transitions in spectroscopy
11. What are chromophores in UV Spectroscopy. Give examples for chromophoric groups.
12. Explain why Fluorescence spectroscopy is called molecular emission spectroscopy.
13. What are the different types of detectors used in HPLC.
14. What is tailing and fronting in chromatography. Explain with suitable diagrams.
15. Differentiate between the terminologies Elution, Eluent and Eluate.
16. What is the composition of the stationary phase in a Cation exchange chromatography. Give an example.
17. Explain the advantages of HPTLC over TLC.
18. What is the principle of size exclusion chromatography. Write any two applications.
19. Any two applications of Nepheloturbidometry.
