

Rajiv Gandhi University of Health Sciences, Karnataka

VII Semester B. Pharm Degree Examination – 02-Nov-2023

Time: Three Hours

Max. Marks: 75 Marks

INSTRUMENTAL METHODS OF ANALYSIS

Q.P. CODE: 5029

Your answers should be specific to the questions asked

Draw neat labeled diagrams wherever necessary

All the Questions are compulsory

LONG ESSAYS

2 x 10 = 20 Marks

1. Explain the working of double beam UV-Visible spectrophotometer with the help of neat labelled diagram.

OR

Discuss the different sources of radiations & detectors used in IR spectroscopy.

2. Discuss the different pumps & detectors used in HPLC.

SHORT ESSAYS

7 x 5 = 35 Marks

3. Discuss the UV method for analysis of single component and multi component analysis.

OR

Discuss the principle of fluorescence using Jablonski diagram

4. Explain the principle and interferences in Atomic spectroscopy.

OR

Discuss briefly rate and plate theory.

5. Write the different methods for preparations of TLC plates.
6. Define Electrophoresis and discuss the factors affecting Electrophoretic mobility.
7. Write the principle and mechanism of Ion Exchange Chromatography.
8. Write the theory and applications of Affinity Chromatography.
9. Discuss the classification of chromatographic methods based on mechanism of separation.

SHORT ANSWERS

10 x 2 = 20 Marks

10. Name the spectral shifts that occur in UV region.
11. What is fingerprint region in IR spectroscopy?
12. Name the electronic transitions that occur in UV region.
13. Give any two applications of Nepheloturbidometry
14. Name the different migration parameters used in planar Chromatography.
15. Write the principle involved in Gel Chromatography.
16. Write the properties of ideal Ion exchange resins.
17. What is derivatization in Gas Chromatography?
18. How aldehyde and ketone can be differentiated in IR spectrum.
19. What is Normal phase & Reverse phase Chromatography?
