

Rajiv Gandhi University of Health Sciences, Karnataka

VII Semester B. Pharm Degree Examination – 28-May-2024

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. Draw and explain with a neat label diagram of double beam UV spectrophotometer. Explain various deviations seen in UV spectroscopy.
OR
Explain the construction and working of flame emission spectrometry with neat labeled diagram and discuss the various types of interferences occurred in atomic spectroscopy.
2. Describe in brief instrumentation of gas chromatography with neat labeled block diagram.

SHORT ESSAYS

7 x 5 = 35 Marks

3. What is Quenching? Enumerate the various factors which influence quenching effect.
OR
Define Wavelength, Bathochromic shift, Hypochromic shift, Hyperchromic effect and Hypochromic effect.
4. Describe the detectors used in IR spectrometer.
OR
Write the practical aspects of development techniques in paper chromatography.
5. Explain the packing method of adsorbent in column chromatography with their merits and demerits.
6. What is zone electrophoresis? Explain any one in detail.
7. Describe the pumps, sample injection techniques and applications of HPLC.
8. Principle, classification and mechanism of ion exchange process in ion exchange chromatography.
9. Principle, ligands used and applications of affinity chromatography.

SHORT ANSWERS

10 x 2 = 20 Marks

10. What is molar extinction co-efficient?
11. Enlist the application of Fluorimetry in quantitative analysis of drugs.
12. Write the vibrational frequency of C=O, OH, amine and amide.
13. Write the application of nephelometry and turbidometry.
14. Differences between flame emission and atomic absorption spectroscopy.
15. What is two dimensional paper chromatography?
16. Classify adsorbents and detecting reagents with examples used in TLC.
17. What is programmed temperature in gas chromatography?
18. What are the gels used in gel chromatography.
19. Write the difference between gel chromatography and gel electrophoresis.
