

Rajiv Gandhi University of Health Sciences, Karnataka

IV Year B.Pharm Degree Examination – JAN-2019

Time: Three Hours

Max. Marks: 70 Marks

Instrumental and Bio-Medical Analysis

(RS – 4)

Q.P. CODE: 2642

Your answers should be specific to the questions asked
Draw neat labeled diagrams wherever necessary

LONG ESSAYS (Answer any Two)

2 x 10 = 20 Marks

1. Describe the construction and working of a double-beam spectrophotometer with a neat diagram and its applications.
2. Discuss in detail about rate theory with support of Vandeemter equation. Narrate about the pumps used in HPLC.
3. Discuss the determination of rate constant by spectroscopy. Explain briefly about sample cells and radiation sources in IR.

SHORT ESSAYS (Answer any Six)

6 x 5 = 30 Marks

4. Explain the reasons for Beer's law?
5. Describe the factors which affect the fluorescence intensity.
6. Briefly explain the different detection methods of paper chromatography
7. Write the theoretical aspects of electrophoresis for separation of molecular mixture
8. Write the construction and working of Glass electrode with advantages and disadvantages
9. Explain the conductometric titration curves for weak acid with strong base, weak acid with weak base and very weak acid with strong base.
10. What is flame emission photometry? Write the theoretical aspects of flame emission photometry.
11. What are nephelometry and Turbidimetry? Write principle involved for the same.

SHORT ANSWERS

10 x 2 = 20 Marks

12. What is multicomponent analysis? Write the application of beer's law in analysis of drugs.
13. Name the fuel gases used in flame emission spectroscopy.
14. Write the block diagram of Nephelometer
15. Write the difference between normal phase and reverse phase chromatography
16. Write the composition and types of paper used in paper chromatography.
17. Write the difference between isocratic and gradient elution
18. Name the detection methods in HPTLC
19. What are the applications of NMR spectroscopy?
20. Write the important application of x-ray diffraction spectroscopy
21. Write the difference between quality control and quality assurance.
