

Rajiv Gandhi University of Health Sciences, Karnataka

IV Year B.Pharm Degree Examination – Aug / Sep 2011

Time: Three Hours

Max. Marks: 70 Marks

INSTRUMENTAL & BIO-MEDICAL ANALYSIS

(Revised Scheme – 3)

Q.P. CODE: 2617

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. State Beer and Lambert's Law. Derive mathematical expression for Beer-Lambert's Law.
2. Explain about column efficiency with the help of 'Plate theory' and 'Rate theory'.
3. Give the construction and working of one each of Reference and Indicator Electrodes.

SHORT ESSAYS (Answer any Six)

6 x 5 = 30 Marks

4. Give the principle involved in the Atomic Absorption Spectroscopy.
5. Write the applications of Nephelo-Turbidimetry.
6. Give the superiority of TLC over other chromatographic techniques.
7. Write in brief about Spectrophotometric Titrations.
8. Explain about considerations to be taken into account for selection of carrier gas.
9. Write a note on interferences in Flame Photometry.
10. Write about principle involved in IR Spectroscopy.
11. What is cell constant? Give a method for determination of the same.

SHORT ANSWERS

10 x 2 = 20 Marks

12. Draw a labeled diagram of Photomultiplier tube.
13. Name the structural types of Ion Exchange Resins.
14. Mention about the factors affecting mobility of ions in Electrophoresis.
15. Define the term 'Molar Absorptivity'.
16. What is $n \rightarrow \pi^*$ transition? Give a method to characterize the same.
17. Name the Detectors used in Flame Photometers.
18. Compare and Contrast Nephelometry and Fluorimetry.
19. What is Edge effect? How to minimize it?
20. What type of curve is obtained when a strong acid is titrated against weak base by conductometry?
21. Name two Fluorescent Indicators.
