

Rajiv Gandhi University of Health Sciences, Karnataka

IV Year B.Pharm Degree Examination – May 2017

Time: Three Hours**Max. Marks: 80 Marks**

INSTRUMENTAL & BIOMEDICAL ANALYSIS (Revised Scheme - 2)

Q.P. CODE: 1967

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, working, merits and demerits of glass electrode.
2. Classify the detectors used in HPLC. Explain the construction, working, merits and demerits of any one of them.
3. State and Derive Beer-Lambert's law. Give the factors that cause deviation from it.

SHORT ESSAYS (Answer any Eight)**8 x 5 = 40 Marks**

4. Discuss the different derivatization techniques used in Gas Chromatography.
5. Discuss the sample handling techniques in IR spectrophotometry.
6. Discuss the interferences encountered in flame photometric estimation.
7. Write a note on ion exchange chromatography.
8. Discuss the parameters affecting column efficiency.
9. Give an account of conductometric titrations.
10. What is electrophoresis? Explain moving boundary electrophoresis.
11. Explain the various factors that affect the intensity of fluorescence.
12. Explain the different methods of preparation of TLC plates.
13. Discuss the radiation source used in UV-Visible spectrophotometer.

SHORT ANSWERS**10 x 2 = 20 Marks**

14. Give the IR vibrational frequency for i) -C=O and ii) -NH₂
15. What is electromagnetic spectrum? Mention the range of wavelength of different regions.
16. Define λ_{max} . Give its significance.
17. What is Reverse Phase Chromatography?
18. What is quenching? Give examples.
19. Why guard column is used in HPLC?
20. Give the pharmaceutical applications of nephelotubidometry.
21. Define electrochemical cell.
22. What is HETP? Give its significance.
23. Write the ideal properties of adsorbents used in chromatography.
