

# Rajiv Gandhi University of Health Sciences, Karnataka

III Year Pharm-D Degree Examination – NOVEMBER 2015

**Time: Three Hours**

**Max. Marks: 70 Marks**

## PHARMACEUTICAL ANALYSIS

**Q.P. CODE: 2862**

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. Explain in detail the sampling techniques in IR spectroscopy.
2. Explain the principle, instrumentation and factors affecting fluorescence intensity.
3. Write the principle and different types of conductometric titration curves with example.

### **SHORT ESSAYS (Answer any Six)**

**6 x 5 = 30 Marks**

4. Explain with Graphical methods of end point determination in Potentiometry.
5. Define Electrophoresis and write a note on type of Electrophoresis.
6. State and explain the mathematical expression for Beer's and Lambert's Law?
7. Define Column Chromatography. Add a note on elution.
8. Explain the terms (a) HETP (b) Theoretical plate (c) Retention time (d) Retention volume.
9. Write a note on Flame Ionization Detector and Thermal conductivity detector.
10. Explain the concept of pre-derivatization & post-derivatization techniques in G.C. with relevant examples?
11. Explain the theory and applications of ion exchange chromatography.

### **SHORT ANSWERS**

**10 x 2 = 20 Marks**

12. Forbidden transitions.
13. Electromagnetic spectrum.
14. Nernst equation
15. Significance of guard columns in HPLC
16. Pharmaceutical applications of HPTLC
17. What is the difference between silica gel, H, G and GF?
18. Give a specific spray reagent to detect the following compounds by TLC  
a) Sulphanilamide b) Amino acids c) Alkaloid d) Phenols
19.  $R_f$  and  $R_x$  values and their significance
20. Finger print range and its significance.
21. Applications of atomic absorption spectroscopy.

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