



# Rajiv Gandhi University of Health Sciences, Karnataka

III Year Pharm-D Degree Examination – NOV 2017

**Time: Three Hours****Max. Marks: 70 Marks****PHARMACEUTICAL ANALYSIS (RS & RS2)****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. With a neat labeled diagram, explain the working principle and instrumentation of HPLC
2. Describe the principle of a Potentiometric titrations? Write the construction and working of a calomel electrode & glass electrode?
3. Explain various methods of preparing TLC plates and its applications.

**SHORT ESSAYS (answer any six)****6 x 5 = 30 Marks**

4. Explain the concepts of statistical quality control
5. What is the principle in a) Normal-Phase Chromatography b) Reverse -Phase Chromatography c) Ion- Exchange Chromatography d) Ion-pair Chromatography
6. Write a brief note on HPTLC
7. Explain the term- Red Shift, Blue Shift, hypochromic shift, hyperchromic shift giving suitable examples for each along with  $\lambda_{max}$  and  $\Sigma$  values.
8. Write a note on ICH Guidelines
9. Explain the principle underlying "Dead- Stop end point technique" and Null point potentiometry
10. What is the principle involved in conductometric titrations? Explain with the help of different titration curves.
11. What is Nebulization? Write a note on burners used and their significance.

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

12. Explain the various region of electromagnetic spectrum
13. Mention the electronic transitions in UV spectroscopy
14. Differentiate between fluorescence from phosphorescence
15. What is self quenching
16. Give the application of ESR
17. What is K-band? Give example
18. How is the efficiency of an ion-exchange resin measured?
19. What is  $C_{18}$  or ODS? What is its use in Chromatography
20. What is the relationship between emf & pH?
21. What are auto titrimeters? What is the principle of operation?

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