

# Rajiv Gandhi University of Health Sciences, Karnataka

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

**Time: Three Hours**

**Max. Marks: 80 Marks**

## PHYSICAL PHARMACEUTICS

(Revised Scheme - 2)

**Q.P. CODE: 1956**

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. What are first order reactions? Deduce the integrated rate expression for a first order reaction. Give the graphical representation for a first order reaction
2. Define thixotropy. Explain the procedures for quantitative measurement of the extent of thixotropic breakdown
3. Define critical solution temperature. Explain the critical solution temperature diagram for phenol – water, triethyl amine –water systems

### SHORT ESSAYS (Answer any Eight)

**8 x 5 = 40 Marks**

4. What are buffers? Discuss the mechanism of buffers action
5. Explain the method of determination of optical rotation and mention the application of optical rotation
6. State and discuss the limitations of nernst distribution law
7. Discuss with examples, the mechanism of action of emulsifying agents
8. State and explain the terms involved in Hixon-crowell cube root law. Give the interpretation
9. What do you mean by Flocculation in structured vehicles? What are the problems normally encountered
10. Discuss the working principle for coulter counter
11. What are the causes for instability in emulsions
12. What do you mean by sensitization and protective colloidal action
13. Write on any one method for the analysis of a complex

### SHORT ANSWERS

**10 x 2 = 20 Marks**

14. What are clathrates?
15. State the mathematical form of DLVO theory
16. What are the causes for phase inversion in emulsions
17. What is the inter relationship between bulk density and bulkiness? Give the significance of bulkiness
18. What is hydrophile lipophile balance number
19. What are solubility curves
20. State and explain Gibb's adsorption equation
21. State Henry's law. Mention its limitations
22. What is sorenson's PH scale?
23. Differentiate between real and ideal systems

tmp.doc

Rajiv Gandhi University of Health Sciences, Karnataka

\*\*\*\*\*

[www.FirstRanker.com](http://www.FirstRanker.com)