

**Rajiv Gandhi University of Health Sciences, Karnataka**  
**Third Semester B. Pharm Degree Examination – JUNE-2019**

**Time: Three Hours**

**Max. Marks: 75 Marks**

**Physical Pharmaceutics - I**

**Q.P. CODE: 5010**

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 and explain Distribution law. Mention its limitations and applications.
2. Define Refractive Index. Discuss in detail working of Abbe's refractometer.
3. Define interfacial tension. Explain in detail any one method for the determination of the interfacial tension.

**SHORT ESSAYS (Answer any Seven)**

**7 x 5 = 35 Marks**

4. Explain ideal solution with examples.
5. Define dissociation constant. Write a note on its application in pharmacy.
6. Describe various methods for the determination of HLB value.
7. Write a note on surface free energy.
8. Classify organic molecular complexes with examples.
9. Describe any one method for analysis of complexes.
10. Describe in detail electrometric determination of pH.
11. Write a note on Henderson Hasselbalch equation.
12. Write a note on solubility of gases in liquids.

**SHORT ANSWERS (Answer All)**

**10 x 2 = 20 Marks**

13. State Raoult's law.
14. Mention the applications of dipole moment in Pharmacy.
15. Write any two limitations of Langmuir adsorption isotherm.
16. Mention the applications of complexation in pharmacy.
17. What are chelates?
18. What are sandwich complexes?
19. What is pH Sorensen's scale?
20. What is buffer capacity?
21. Mention the applications of buffers in pharmacy.
22. What is polymorphism? Give any two examples.

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