

**Rajiv Gandhi University of Health Sciences, Karnataka**  
**Third Semester B. Pharm Degree Examination – 17-Nov-2022**

**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

All the questions are compulsory

**LONG ESSAYS**

**2 x 10 = 20 Marks**

1. Define solubility. Discuss different mechanism of solute solvent interactions.

**OR**

Define refractive index. Give its applications. Discuss in detail working of Abbe's refractometer.

2. Explain Griffins scale of HLB value. Explain different methods to determine HLB value.

**SHORT ESSAYS**

**7 x 5 = 35 Marks**

3. State Distribution law along with its limitations.

**OR**

Write a note on Raoult's Law.

4. What are eutectic mixtures? Explain with example.

**OR**

Explain in detail spreading coefficient with relevant equations.

5. What are Micelles? Explain its formation

6. Define complexes? Classify with example.

7. Explain solubility method for Analysis of complexes.

8. Define pH? Explain Sorensen's pH scale.

9. Write a note on buffer capacity.

**SHORT ANSWERS**

**10 x 2 = 20 Marks**

10. Define Critical solution temperature.

11. Define specific rotation.

12. What is polymorphism?

13. Define adsorption isotherms.

14. Give applications of Chelate complexes.

15. What are channel type complex? Give example.

16. Define dielectric constant.

17. Define paratonic solutions.

18. Give Henderson-Hasselbalch equation for Acid buffer.

19. Give examples for buffers in biological system.

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