Rajiv Gandhi University of Health Sciences, Karnataka
Third Semester B. Pharm Degree Examination – 28-Apr-2025

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 azeotropic mixture. With the help of neat diagram explain in detail fractional distillation process.**

   Or

   Define Solubility? Explain its mechanism of solute solvent interaction. Explain solubility of Gases in liquids

   OR

   Define optical rotation. Discuss in detail working of polarimeter.

2. Define interfacial tension. Explain in detail the working of stalagmometer. Write its applications.

SHORT ESSAYS　　　　　　　　　　　　　　　　**7 x 5 = 35 Marks**

3. Explain ideal solution with examples.

   OR

   Define dipole moment. Write a note on its application in pharmacy

4. Describe the process of detergency

   OR

   Derive an equation of spreading coefficient. What is its significance in pharmacy

5. Define complex. Classify with examples.

6. What is HLB value? Describe different methods for its determination.

7. Describe in detail calorimetric determination of pH.

8. Define pH and write a note on Sorensen's pH scale.

9. Write a note on partially miscible liquids with examples.

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

10. What are the limitations of distribution law?

11. What are aerosols?

12. Write BET equation.

13. **What are metal complexes**
    Or
    What are sandwich complexes?

14. What are clatharates?

15. Write the applications of picric acid complexes.

16. Define the term paratonicity with example.

17. Write any two applications of buffers in pharmacy.

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18. What is buffer capacity?

19. What are eutectic mixtures give an example.

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