

Rajiv Gandhi University of Health Sciences, Karnataka

Third Semester B. Pharm Degree Examination – 30-Oct-2025

Time: Three Hours

Max. Marks: 75

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 the methods of determining solubility of solids in liquids

OR

Define optical rotation. Discuss in detail principle and working of Polarimeter

2. Define surface tension. Explain the principle and measurement involved in determination of surface tension by capillary rise method. Give its limitations

SHORT ESSAYS

7 x 5 = 35 Marks

3. Write a note on fractional distillation

OR

Explain critical solution temperature and its applications

4. Explain in detail different states of matter with examples

OR

Explain Freundlich and BET equation with example

5. Write a note on significance of buffers in preparation of isotonic solutions

6. Describe different methods of determining HLB value

7. Discuss the mechanism of formation of hexamine cobalt chloride ligand complex

8. Write the calorimetric method of determination of pH

9. Explain organic molecular complexes with examples

SHORT ANSWERS

10 x 2 = 20 Marks

10. Define chelating agents with example

11. What are isotonic and paratonic solutions?

12. Write the solubility expressions for the solubility of solid in liquids

13. What do you mean by polarization?

14. Define critical micellar concentration

15. Give the buffer equation for an acid and base

16. Define protein binding with example

17. What are aerosols?

18. What are complexes? Give examples

19. Write any two applications of buffer in biological systems
