

**Rajiv Gandhi University of Health Sciences, Karnataka**  
**Third Semester B. Pharm Degree Examination – 30-May-2024**

**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. Explain in detail different factors affecting the solubility of drugs.  
**OR**  
Discuss dielectric constant and dipole moment with their applications in Pharmacy.
2. Define Adsorption isotherms. Explain the behaviour of various types of Adsorption isotherms.

**SHORT ESSAYS**

**7 x 5 = 35 Marks**

3. Explain organic molecular complexes with example.  
**OR**  
Define contact angle. Write its applications in pharmacy.
4. Explain in detail the principle and working of polarimeter  
**OR**  
Define pH. Deduce buffer equation for weak acid and its salt.
5. Define Critical solution temperature and mention their applications.
6. Write a note on amphiphiles.
7. Write the applications of buffers in pharmaceutical and biological system.
8. Write a note on eutectic mixtures.
9. Explain inclusion complex.

**SHORT ANSWERS**

**10 x 2 = 20 Marks**

10. What are Picric acid complex? Give example.
11. Types of pH determination methods
12. Enumerate different methods of analysis of complex.
13. What you mean by polarization?
14. Isotonic and paratonic solutions
15. Define sublimation.
16. Define Polymorphism
17. Give Henderson-Hasselbalch equation
18. Define distribution law.
19. Two applications of complexation.

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