

Rajiv Gandhi University of Health Sciences, Karnataka

Third Semester B. Pharm Degree Examination – 04-Dec-2020

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 Nernst Distribution law along with its limitations. Give its applications.
2. Write a note on Sorensen's pH scale. Discuss the methods used for determination of pH.
3. Define surface tension? Discuss the principle involved in capillary rise method.

SHORT ESSAYS (Answer any Seven)

7 x 5 = 35 Marks

4. Discuss diffusion principles involved in biological systems.
5. Discuss the factors affecting the solubility of gases in liquid.
6. Define optical rotation. Discuss in detail working of polarimeter.
7. Explain the phenomena of wetting and detergency.
8. Define HLB? Explain different methods of determine HLB of a surfactant.
9. Explain the various application of complexation in pharmacy with examples.
10. Explain pH titration method of analysis of complexes.
11. Define dielectric constant and dipole movement. Write its applications.
12. What are buffer solutions? Derive a buffer equation for a weak acid and its salt.

SHORT ANSWERS (Answer All)

10 x 2 = 20 Marks

13. Define Raoult's law.
14. Define solubility and dissolution.
15. What are liquid crystals?
16. Give BET equation and its significance.
17. Give the applications of Beta cyclodextrin complexes.
18. Importance of protein binding and drug action.
19. What are Clathrates? Give example.
20. Give any four examples of pharmaceutical buffers.
21. Define spreading coefficient. Write one application.
22. What are Hypertonic solutions? Give examples.
