Rajiv Gandhi University of Health Sciences, Karnataka

II Year B. Pharm Degree Examination – 03-Nov-2023

Time: Three Hours **Max. Marks: 70 Marks**

PHYSICAL PHARMACEUTICS (RS - 4)

Q.P. CODE: 2630

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. Define and classify amphiphiles. Explain the mechanistic role of amphiphiles in Pharmacy
2. Define Viscosity. Classify different viscometers with examples. With the help of neat diagram explain the principle and working of any one multipoint viscometer.
3. Define stability studies. Explain in detail how the shelf life of pharmaceutical product is determined.

SHORT ESSAYS (Answer any Six) **6 x 5 = 30 Marks**

4. Explain physical degradation of pharmaceuticals and its preventive measures
5. State Nernst Distribution law. Give its applications in pharmacy.
6. Explain various factors affecting rate of dissolution of drugs with examples.
7. Explain the concept DLVO theory with energy curves. How this theory is applied in stabilizing the colloidal dispersion.
8. Define angle of repose. Explain the method to determine the same
9. Enumerate different methods of analysis of complex. Explain pH titration method of analysis.
10. Give the principle and working of dunouy's **tensiometer**
11. Explain the methods to determine the thixotropic behavior of **non newtonian liquid**.

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

12. Define Contact angle
13. Define the terms shear thinning and shear thickening system. Give example for each type of material.
14. Define half life. Explain concept of half life in first order reaction
15. Give the limitations of Distribution law
16. Define flux
17. Give general methods of preparation of colloids.
18. Define shape factor. What is its importance in micromeritics?
19. What is granular density and true density
20. Briefly describe quinhydrine complex.
21. Give any four applications of X-Ray diffraction analytical technique.

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