Rajiv Gandhi University of Health Sciences, Karnataka

II Year B.Pharm Degree Examination – 03-Jan-2020

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

PHYSICAL PHARMACEUTICS
(Revised Scheme 3)
Q.P. CODE: 2606

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 Thixotropy. Draw thixotropic curves. How the extent of thixotropic breakdown can be measured?
2. Enumerate the derived properties of powders. How they are evaluated?
3. Discuss the influence of temperature on the rate of a chemical reaction. How the shelf life of a drug formulation can be arrived at with the principles of chemical kinetics?

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

4. Write on Purification of hydrophobic colloidal dispersions.
5. Explain what do you mean by sedimentation parameters.
6. State Nernst Distribution Law and mention three application of knowing partition coefficient values.
7. What is steady state diffusion? Explain.
8. What is an adsorption isotherm? Write on Freundlich adsorption isotherm.
9. Write on interfacial film theory to account for the stability of emulsions.
10. Write on any two methods for the analysis of a complex.
11. Define critical solution temperature. Draw CST diagram for Phenol-Water, Triethylamine-Water, Nicotine Water systems.

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

12. Define Hydrophile-Lipophile balance number.
13. How is Sorensen's pH scale constructed?
14. Define stokes diameter and surface diameter.
15. Define Poise unit.
16. What is Plug flow? How it can be over come?
17. Two approaches for Protection against hydrolysis.
18. What are micro emulsions?
19. What is micellar solubilization?
20. What are units for k in case of a zero-order reaction?
21. How hydrophobic colloids are stabilized?

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