Rajiv Gandhi University of Health Sciences, Karnataka

Third Semester B. Pharm Degree Examination – 25-Mar-2021

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 the various factors influencing the dissolution of poorly soluble drugs.
   OR
   Discuss dielectric constant and dipole moment with their applications in pharmacy
2. Define Surface tension. Explain the principle involved in determination of surface tension by capillary rise method. Give its limitations.

SHORT ESSAYS **7 x 5 = 35 Marks**

3. Explain various ideal solubility parameters for solubility process.
   OR
   What are eutectic mixtures? Explain with examples.
4. Deduce Freundlich adsorption isotherm and give its graphical representation.
   OR
   Explain the principle involved in pH titration method in complexation.
5. What are buffered isotonic solutions? Explain.
6. Explain the electrical double layer of an interface.
7. Discuss Azeotropic distillation with examples.
8. Explain any one method for the determination of pH.
9. Explain different types of metal ion complex and give examples.

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

10. Write four applications of complexation in pharmacy.
11. Define steady state diffusion and sink condition.
12. Two applications of amphiphiles in pharmacy.
13. Define isotonic solutions and give two examples.
14. Define latent heat.
15. Define Buffers and buffer capacity.
16. What do you mean by polarization?
17. Define and classify complexes.
18. Define protein binding.
19. Give examples for pharmaceutical and biological buffers.

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