

QP Code: 322006

Reg. No.....

**Third Semester B. Pharm Degree Supplementary Examinations
May 2023**

Physical Pharmaceutics I

(2017 Scheme)

Time: 3 Hours

Max. Marks: 75

- *Answer all questions to the point neatly and legibly • Do not leave any blank pages between answers • Indicate the question number correctly for the answer in the margin space*
- *Answer all parts of a single question together • Leave sufficient space between answers.*
- *Draw diagrams wherever necessary*

Essays

(2x10=20)

1. Discuss any five physicochemical properties of drugs. Explain their determination and applications.
2. Define buffer and buffer capacity. What are buffered isotonic solutions. How they are prepared. Explain. (4+2+4)

Short Notes

(7x5=35)

3. Fick's law of diffusion and its uses
4. What are the different ways of expressing solubility. Write their uses.
5. What is Raoult's law and its applications. Explain.
6. What are the applications of distribution law. Explain.
7. Discuss the solubility of gases in liquids.
8. How surface area can be determined. Explain. What are its uses.
9. Define true density, bulk density, porosity, angle of repose and write their uses.

Answer Briefly

(10x2=20)

10. What is solvation
11. What is critical solution temperature
12. Particle number
13. What are Clathrates
14. Any two uses of complexation in pharmacy
15. What are eutectic mixtures. Give examples.
16. The influence of relative humidity on storage of pharmaceuticals.
17. What is the difference between amorphous and crystalline state of drug
18. pH determination by electrometric method.
19. What are smectic crystals.
