

**QP Code: 322006**

**Reg. No.....**

**Third Semester B. Pharm Degree Regular/Supplementary  
Examinations May 2025**

**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. With a neat, labelled diagram discuss phenol-water solubility curve.
2. Discuss microscopic method of particle size distribution with its benefits and limitations.

**Short Notes**

**(7x5=35)**

3. Mention five limitations of Nernst distribution law.
4. Explain different types of porosities in a powder.
5. Explain the principle of eutectic mixture with an example.
6. How is optical rotation measured.
7. Explain any one method of analysis for determining stoichiometric ratio.
8. Explain the principle involved in the determination of pH of a solution using an electrometric method.
9. Derive a buffer equation for an acid buffer with suitable example.

**Answer Briefly**

**(10x2=20)**

10. Mention the applications of solvates in pharmacy.
11. Define refractive index.
12. Enlist the factors influencing drug – protein binding.
13. Explain adsorption.
14. What is a sandwich compound.
15. Sorensen's pH scale.
16. Define solubility and mention any two ways to express the same.
17. Explain the importance of vapour pressure in pharmacy.
18. Define a buffer solution. Give one example.
19. Differentiate between iso-osmotic and isotonic solutions.

\*\*\*\*\*