

**Subject Code: B13202/R13****I B. Pharmacy II Semester Supplementary Examinations Feb. - 2015****PHYSICAL PHARMACY-I****Time: 3 hours****Max. Marks: 70**

Question Paper Consists of **Part-A** and **Part-B**  
Answering the question in **Part-A** is Compulsory,  
Three Questions should be answered from **Part-B**

\*\*\*\*\*

**PART-A**

1. (a) Write about mesophase.
- (b) What is thermochemistry?
- (c) Briefly explain dipole moment.
- (d) What is mole percent?
- (e) Define and explain reference state.
- (f) Discuss briefly the preparation of pharmaceutical buffer solutions.

[4+4+4+3+3+4]

**PART -B**

2. Define and explain phase rule for one component systems and eutectic mixtures. [16]
3. State and explain the first and second law of thermodynamics. [16]
4. Explain in detail dielectric constant induced polarization and dipole moment. [16]
5. (a) Derive Raoult's law and discuss its limitations. [10+6]  
(b) Explain in detail isopiestic method.
6. Discuss in detail the van't Hoff theory of solutions. [16]
7. (a) Write in detail buffer action mechanisms. [8+8]  
(b) Derive and explain buffer equation.

\*\*\*\*\*