R10

SET - 1

I B. Pharmacy I Semester Supplementary Examinations, Jan/Feb - 2018
PHYSICAL PHARMACY-I

Time: 3 hours   Max. Marks: 75

Answer any **FIVE** Questions
All Questions carry **Equal** Marks
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1. a) Define polymorphism. Describe the importance of polymorphism in pharmacy with examples.   (8M)

    b) Discuss the properties and significance of liquid crystals.   (7M)

2. a) Explain isothermal work of expansion against a variable pressure.   (8M)

    b) Mention the applications of thermochemistry.   (7M)

3. a) Describe permanent dipole moment of polar molecules with examples.   (8M)

    b) Write a note on optical rotatory dispersion.   (7M)

4. a) Explain one method to determine vapor pressure of solution.   (8M)

    b) Write a note on lowering of the vapor pressure.   (7M)

5. a) Define phase rule. Explain its components with examples.   (8M)

    b) Describe one component system with example.   (7M)

6. a) Explain work of expansion against constant pressure.   (8M)

    b) Write about free energy functions and applications.   (7M)

7. a) Describe X-Ray diffraction method.   (8M)

    b) Claude's process is more efficient than linde's process for liquefaction of gases. explain.   (7M)

8. a) Describe any one method to determine molecular weight of compound.   (8M)

    b) An aqueous solution of $FeSo_4$ was prepared by adding 41.50g of $FeSO_4$ to enough water to make 100mL of solution. T density of the solution is 1.0375 and the M.Wt of the $FeSO_4$ is 151.9. Calculate Molarity, Molality, molefraction of water and other constituents.   (7M)