UKA TARSADIA UNIVERSITY
Maliba Pharmacy College
B. Pharm. 3rd Semester Internal Examination 2013 (*Mid-Sem II*)
030020301- Physical Pharmacy - I

Time: 10:30 a.m. To 12:30 p.m.   Max. Marks: **40**
Date: 22/11/2013

Instructions:
- Attempt any **FIVE** questions.
- Each question carries **08** marks.
- Make suitable assumption whenever necessary.
- Figures to the right indicate full marks.

Q.1	A)	Define: Normality, Mole fraction, Degree of dissociation, Activity	04
	B)	State Henry's law. Give difference between ideal and real solution.	04
Q.2	A)	Explain concept of osmosis and any one method for the measurement of osmotic pressure.	04
	B)	Describe modern theories of electrolytic dissociation of strong electrolytes.	04
Q.3	A)	Explain process and determination of solubility of solid in liquid.	04
	B)	Describe the factors influencing solubility of drugs in liquids.	04
Q.4	A)	Discuss solute-solvent interaction that influences the solubility of drugs in liquids.	04
	B)	Explain BCS according to solubility.	04
Q.5	A)	Comment on:	04
		(a) Boiling point of solution having non volatile solute is always lower than boiling point of solvent.	
		(b) NaCl is not soluble in benzene.	
	B)	Define buffer. Write a short note on buffers in pharmaceutical system.	04
Q.6	A)	What is the mole ratio, [Salt]/[Acid] required to prepare an acetate buffer of pH 5.0? Express the result in mole fraction.	04
	B)	Write a note on buffer capacity.	04
Q.7	A)	Enlist methods to adjust tonicity and explain Class I methods.	04
	B)	Calculate the gram of sodium chloride needed to make 30 ml of a 2% of isotonic physostigmine salicylate solution using sodium chloride method (The E value of drug is 0.16)	04