C.U.SHAH UNIVERSITY
Winter Examination-2018

Subject Name: Pharmaceutical Chemistry-II (Physical)
Subject Code: 4PS01PCH2   **Branch:** B.Pharm

Semester:1   **Date : 03/12/2018**   **Time : 02:30 To 05:30**   **Marks : 70**

Instructions:
  (1) Use of Programmable calculator & any other electronic instrument is prohibited.
  (2) Instructions written on main answer book are strictly to be obeyed.
  (3) Draw neat diagrams and figures (if necessary) at right places.
  (4) Assume suitable data if needed.

Q-1	**Define the following terms**	**(14)**
a)	Molarity	
b)	Molality	
c)	Entropy	
d)	Enthalpy	
e)	Adsorption	
f)	Absorption	
g)	Order of a reaction	
h)	Photochemistry	
i)	Surface tension	
j)	Catalyst	
k)	Dipole moment	
l)	Dielectric constant	
m)	Refractive index	
n)	Viscosity	

Attempt any four questions from Q-2 to Q-8

Q-2		**Attempt all questions**	**(14)**
	a.	Write a note on 'The Carnot Cycle'	**(7)**
	b.	Write a detail note on First law of thermodynamics	**(7)**
Q-3		**Attempt all questions**	**(14)**
	a.	State and explain Raoult's law of dilute solution. Discuss deviation of real solution from the law	**(7)**
	b.	What do you mean by partition coefficient? How it is useful in pharmacy? State and explain distribution law	**(7)**
Q-4		**Attempt all questions**	**(14)**
	a.	Write a note on One and two component systems	**(7)**
	b.	Write a note on Phase rule	**(7)**
Q-5		**Attempt all questions**	**(14)**
	a.	Write a note on fractional distillation	**(7)**
	b.	Write a note on Quantum efficiency	**(7)**

Q-6		**Attempt all questions**	**(14)**
	a.	Write note on Debye–Huckel theory	**(7)**
	b.	Explain the Lambert-Beer law in detail	**(7)**
Q-7		**Attempt all questions**	**(14)**
	a.	Explain Freundlich and Gibbs adsorption isotherom	**(7)**
	b.	Describe adsorption application in pharmacy	**(7)**
Q-8		**Attempt all questions**	**(14)**
	a.	Write a note on methods for determination of order of reaction	**(7)**
	b.	Write a note on characteristic of homogenous and heterogeneous catalyst	**(7)**