 **UNIVERSITY OF THE PUNJAB**

First Semester 2014 Roll No. ................

PAPER:Chemistry-**I**(Physical Chemistry) TIME ALLOWED:2 hrs. & 30 mins. Course Code:CHEM-101 / CHM-11304 MAX. MARKS:50

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Part II (Subjective)

Question No 2: Write short answer of the following questions (2X10=20)

**I.** What is meant by "sedimentation"?

**II.** What is parachor ?

**III.** What is meant by magnetic susceptibility ?

**IV.** Describe lowering of vapour pressure.

**V.** What is catalysis ?

**VI.** What is physical adsorption ?

**VII.** What is meant by gels ?

**VIII.** Explain the term "micelles".

**IX.** Describe "isotonic solution".

**X.** What is "Tyndal Cone Effect".

(Long Questions)

**Q.No 3** What is meant by the order of reaction? Derive the kinetic expression for the second

order reaction in which the reactants are: (5+5)

(a) at same concentration (b) at different concentration

**Q.No 4** What is meant by space lattice of a crystal? Derive Bragg's equation for the diffraction

of X-Rays by crystal lattice. (10)

**Q.No 5 a)** Derive Clausius-Clapeyron Equation. (6)

**Q.No 5 b)**  Describe "Second Law of Thermodynamics". (4)