Printed Pages : 3

PHARM121

(Following Paper ID and Roll No. to be filled in your Answer Book)

PAPER ID : 150216

Roll No. | | | | | | | | | | |

B.Pharm.

(SEM II) THEORY EXAMINATION, 2014-15

PHYSICAL CHEMISTRY

Time : **3** Hours] [Total Marks : **80**

SECTION - A

1 Attempt all questions each question carries one mark : **1×16=16**

(a) Give Kirchhoff s equation _____.

(b) Give the Statement of second law thermodynamics.

(c) How many components in KI-water system _____.

(d) Unit of surface tension in CGS system _____.

(e) Ostwald viscometer used to determine _____.

(f) Give the unit of specific conductivity _____.

(g) Benzene having Dipole moment _____.

(h) The type of bonding in $MgCl_2$ _____.

(i) Define adsorption.

(j) what is the effect of temperature on viscosity _____.

(k) Water system is a _____ component system.

(l) Give an example of ionic crystal _____.

(m) KBr is an example of _____ electrolyte.

(n) Making ice cubes is an example of exothermic reaction.(True/ False)

(o) A system which can exchange energy but not matter with its surrounding is called _____. system.

(p) Entropy is defined as _____.

SECTION-B

2 Attempt **any six** part, each carries 4 marks : **4×6=24**

(a) What is Hess Law of constant heat summation?

(b) Discuss phase diagram of water.

(c) Define Kohlrausch's law. Discuss its application.

(d) What is adsorption? Describe Freundlich adsorption isotherm.

(e) What are Miller indices?

(f) Explain Faraday's law of electrolysis.

(g) Derive Kinetic Equation of gas.

(h) Explain in brief:

(i) Heat of combustion

(ii) Crystalline and amorphous solid.

SECTION - C

3 Attempt **any four** parts each part carries 10 marks : **10×4=40**

(a) What is joule Thomson effect give working of Bomb Calorimeters?

(b) What is meant by transport number of ions? Describe Hittorf's method for the determination of transport number of silver ions.

(c) Discuss the various type of catalysis and also give detail about enzyme catalysis.

(d) What are buffer solutions? Derive Henderson-Hasselbalch equation for calculating pH of a buffer solution.

(e) Write a short note on **any two**:

(i) Rheochor

(ii) Refractive index

(iii) Sublimation critical point