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BOP-122

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

PAPER ID :150202

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

B. Pharma. (Semester-VIII)

SPL. THEORY EXAMINATION, 2014-15

PHARMACEUTICAL CHEMISTRY - III (PHYSICAL CHEMISTRY)

Time : 3 Hours] *[Total Marks : 70*

Note: Attempt all questions. All questions carry equal marks.

1. Attempt all parts: 1×14

(i) The free rotation about a bond when the bond is a.....

(ii) In an exothermic reaction the internal energy of the products is.....than internal energy of the reactants.

(iii) For the study of distribution law the two solvents should be.....

(iv) The expression for Nernst distribution law is.....

(v) A uniform part of a system in equilibrium is termed as a.....

(vi) A system with F=0 is known as.....

(vii) Expression for reduced phase rule is given as F=.....

(viii) A Zero order reaction is one whose rate is independent of.....

(ix) In the synthesis of ammonia by Haber's process.....acts as catalytic poison.

(x) The phenomenon of concentration of molecules on a surface is called.....

(xi) Chemisorption generally.....with temperature.

(xii) The units of specific conductance are.....

(xiii) The fraction of the total current carried by the cation or anion is termed as.....number.

(xiv) One faraday is equal to.....coulombs.

2. Attempt <u>any six</u> of the following: 4×6

(i) Explain hybridization with examples.

(ii) Discuss bond energies.

(iii) Differentiate between chemisorption and physical adsorption.

(iv) Write a note on rheochor and parachor.

(v) Explain Nernst's Distribution law equation.

(vi) Give differences between order of reaction and molecularity.

(vii) Discuss Faraday's laws of electrolysis.

(viii) Give pharmaceutical applications of Adsorption.

3. Attempt <u>any four</u> of the following: 8×4

(i) Discuss enzyme catalysis with examples.

(ii) Explain Henry's law and give limitations and applications of Distribution law.

(iii) Discuss phase diagram for any two component system.

(iv) Derive <u>any two</u> of the following:

(a) Second order reaction

(b) Langmuir adsorption isotherm

(c) Bragg's equation.

(v) Explain <u>any two</u> of the following:

(a) Liquid crystals

(b) Deby Huckle theory

(c) Types of thermodynamic systems.

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