Printed Pages: 02 | Sub Code:BOP122

Paper Id: 150202 | Roll No. | | | | | | | | | | |

B PHARM
(SEM-II) THEORY EXAMINATION 2018-19
PHARMACEUTICAL CHEMISTRY-III
(PHARMACEUTICAL PHYSICAL CHEMISTRY)

Time: 3 Hours *Total Marks: 100*

Note: **1.** Attempt all Sections. If require any missing data; then choose suitably.

SECTION A

1. Attempt *all* questions in brief. **2 x 10 = 20**

a. Give the unit of specific conductance.
b. State first law of thermodynamics.
c. Define rheochor.
d. Write down the Phase rule for two component system.
e. Define term degree of freedom with suitable example.
f. Define equivalent conductance.
g. What is Bond Energy?
h. Write numerical definition of entropy.
i. What is molar conductance?
j. Differentiate between physical adsorption and chemical adsorption.

SECTION B

2. Attempt any *three* of the following: **10 x 3 = 30**

a. Explain **first** order reaction kinetics in detail.
b. What is distribution law? Give its limitation. How is distribution law modified if one of the solute undergoes dissociation or association?
c. Derive rate constant for second order reaction when both reactants are different.
d. Define the term surface tention. Discuss factors which effect surface tention.
e. Briefiy discuss transition state theory and write short note on acid –base catalysis.

SECTION C

3. [redacted]

(a) Give the postulates of molecular orhital theory and differentiate between bonding and anti bonding molecular orhitals.
(b) Define phase, component and degree of freedom with suitable example. Discuss in detail about one component H_2O phase diagram.

4. [redacted]

(a) State and explain in detail first law of thermodynamics.
(b) Explain Langmuir and Freundlich adsorption isotherm.

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5. [redacted]

(a) Give the postulates of molecular orbital theory and differentiate between bonding and anti bonding molecular orbitals.

(b) Explain heat of reaction, heat of formation, heat of neutralization and heat of solution with suitable example.

6. [redacted]

(a) What is Hess law of constant heat of summation and its importance?Explain the principle and working of Bomb calorimeter with suitable diagram.

(b) Define eleetrolysis. Explain faraday's law of electrolysis and also discuss Kohlrausch law.

7. [redacted]

(a) Write in detail about Debye-Huckel theory to explain conductance of strong electrolytes.

(b) Write in detail about symmetry of crystals and Explain Bragg's equation for crystal diffraction.

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CORRECTION M 10.05.19 BOP122

Kindly Read Q.no. 5a as

5a) Discuss in detail solid-crystalline state and polymorphism.

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