Printed Pages:01 **Sub Code: RPH 207**

Paper Id: 150277 **Roll No.** | | | | | | | | | | |

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

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

Note: 1. Attempt all Sections.

SECTION A

1. Attempt *all* questions in brief. 2 x 7 = 14

a. Differentiate between electrovalent and covalent bonding.
b. Define catalysis.
c. What is distribution law?
d. Give first law of thermodynamics.
e. Define heat of formation and heat of combustion.
f. Describe Ostwald dilution law.
g. Define adsorption with example.

SECTION B

2. Attempt any *three* of the following: 7 x 3 = 21

a. What is chemical kinetics of the reaction? Explain first and second order of reaction with proper example.
b. What are crystals and discuss their types along with polymorphism.
c. Describe Hess's law of constant heat summation and their use in enthalpy calculation in various chemical reactions.
d. What is kohlrausch law? Describe Faraday law of electrolysis in detail.
e. Describe phase rule in single and multiple component system.

SECTION C

3. Attempt any *one* part of the following: 7 x 1 = 7
(a) Describe molecular orbital theory in detail
(b) Differentiate between Acid base and Enzyme catalysis.

4. Attempt any *one* part of the following: 7 x 1 = 7
(a) What is Distribution law and describe its application.
(b) Define surface tension, parachor, rheochor, viscosity, refractive index, optical rotation and dipole moment.

5. Attempt any *one* part of the following: 7 x 1 = 7
(a) Describe different law of thermodynamics in detail.
(b) Define heat of reaction, heat of formation and heat of neutralization with proper sign convention.

6. Attempt any one part of the following: 7 x 1 = 7
(a) Differentiate between molar and equivalent conductivity and its variation with dilution.
(b) Write a short note on degree of ionization and Ostwald dilution law.

7. Attempt any one part of the following: 7 x 1 = 7
(a) Define adsorption, types and mechanism of adsorption along with its pharmaceutical application.
(b) Write a short note on degree of freedom and phase rule.

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