Printed Pages:02 Sub Code: PH121

Paper Id: 150225 Roll No. | | | | | | | | | | |

B PHARM

(SEM II) THEORY EXAMINATION 2018-19

PHYSICAL PHARMACY-I

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. **2x10= 20**

a. Define polymorphism
b. What do you mean by liquid crystal?
c. Write the factors affecting solubility.
d. What is reduced phase?
e. Define buffer capacity.
f. Write Henderson-hasselbach equation.
g. Differentiate ideal and real solution.
h. Give example of complex reaction.
i. What do you understand by reduced phase rule?
j. Define colligative properties

SECTION B

10x3= 30

2. Attempt any three of the following:

a. Write note on any of the two
   i. Eutectic mixtures
   ii. solids-crystalline
   iii. latent heat
b. Define Partition coefficient, method for determination and explain its importance in pharmacy.
c. Define tonicity. Enumerate the different methods for adjustment of tonicity.
d. Write note on solubility of gas in liquids.
e. Explain conductance and its measurement Debye Huckel theory

SECTION C

3. Attempt any *one* part of the following: **10 x 1 = 10**

a) Write note on the following:
   (i) States of matter
   (ii) critical point
   (iii)amorphous
b) Define liquid complex. Write note on glassy state and relative humidity.

4. Attempt any *one* part of the following: **10 x 1 = 10**

a) Write note on the following:
   (i) Phase
   (ii) Component
   (iii)degree of freedom
b) Explain the different factors affecting solubility.

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5. **Attempt any *one* part of the following:** **10 x 1 = 10**
   a) Define pH. Enumerate the buffers equation and use of buffer in pharmaceutical system.
   b) Write note on solubility of solids in liquids and solute-solvent interactions.

6. **Attempt any *one* part of the following:** **10 x 1 = 10**
   a) Write note on colligative properties.
   b) What do you understand by Debye Huckle Theory? Also discuss its role in conductance measurement. Define Electric conductance. How is it measured?

7. **Attempt any *one* part of the following:** **10 x 1 = 10**
   a) Write note on complex reaction, characteristics of homogenous and heterogeneous catalysis, acid base and enzyme catalysis.
   b) Deduce an equation for determining the specific reaction rate constant of a first order reaction.

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