Registration No : | | | | | | | | | | |

Total Number of Pages : 02 **B.Pharm**
PH.3.1

3rd Semester Back Examination 2019-20
PHARMACEUTICS - II
BRANCH : B.Pharma
Max Marks : 70
Time : 3 Hours
Q.CODE : HB520

Answer Question No.1 which is compulsory and any FIVE from the rest.
The figures in the right hand margin indicate marks.

Q1 **Answer the following questions :** **(2 x 10)**

a) What are liquid crystals
b) What is BET adsorption isotherm? Write its significance
c) Isotonicity must be maintained incase of ophthalmic and parenteral preparation. True / False. Justify
d) How polymorphs influence pharmaceutical dosage form development explain.
e) Define and differentiate between sublimation and deposition. Give examples of any two agents exhibiting sublimation
f) What do you mean by buffer capacity, write the equation to determine it
g) What are surface active agents give example of any two of them
h) Define eutectic mixture.
i) Write down the equation of Henderson- Hasselbalch equation
j) Write any two applications of complexation in pharmacy

Q2 a) Write short note on spreading coefficient and its derive an equation for it **(5)**
b) Explain the term colligative properties. Express methods for determination of freezing point depression and osmotic pressure **(5)**

Q3 a) Write short note on Freundlich Adsorption isotherm **(5)**
b) Differentiate between solids and liquids. Write a note on kinetic theory of gases **(5)**

Q4 a) Write note on partition coefficient **(5)**
b) What do you mean by HLB. Analyze its role in selection of surface active agents for development of suspension or emulsion **(5)**

Q5 a) Write note on Debay Huckel Theory **(5)**
b) Derive the equation for protein binding kinetics **(5)**

Q6 Write the principle involved in second law of thermodynamics. Derive equation for the efficiency of heat engine with suitable example. **(10)**

Q7 What is CMC? Explain the phase equilibiria for a two component system containing liquid phase like phenol-water with help of temperature curve. **(10)**

Q8 **Write short answer on any TWO :** **(5 x 2)**

a) Measurement of tonicity
b) Buffered isotonic system
c) Van'stoff equation and Clausius Clapeyron equation