

Seat No: _____

Enrollment No: _____

PARUL UNIVERSITY
FACULTY OF PHARMACY
B. Pharm. Summer 2021-22 Examination

Semester: 3
Subject Code: BP302T

Date: 05/04/2022
Time: 10:00am to 01:00pm
Total Marks: 75

Subject Name: Physical Pharmaceutics I – Theory

Instructions:

1. Figures to the right indicate maximum marks.
2. Make suitable assumptions wherever necessary.

Q.1 Multiple Choice Questions (MCQs) (1 Mark Each)

(20)

1. when 1 part of solute is soluble in 20 parts of solvent the solubility can be defined as
a) Very Soluble
b) Soluble
c) Freely Soluble
d) Sparingly Soluble
2. Cavitations occurs in
a) Solute molecule
b) Solvent molecule
c) Solution
d) Both A & C
3. To Solubilize Benzene in Alcohol _____ is used
a) Toluene
b) Chloroform
c) Carbon Tetra Chloride
d) Acetone
4. Equation for ideal solubility was given by
a) Yalkowsky
b) Newton
c) Fick
d) None of the Above
5. Lower is the melting point
a) Better is the solubility
b) Poor is the solubility
c) No Effect
d) Data Insufficient
6. By increasing the temperature the solubility will
a) Always Increase
b) Always Decreased
c) Depends on the type of Reaction
d) No Effects of Temperature
7. The Process in which molecules convert into the solid form from the vapor phase is known as
a) Vaporization
b) Sublimation
c) Deposition
d) Liquefaction
8. Nicotine water system has
a) UCST
b) LCST
c) UCST & LCST
d) none of the above
9. Dalton's law is about
a) Diffusion
b) CST
c) Partial Pressure
d) Association
10. Polymorph may exhibit differences in _____ property.
a) Melting Point
b) Solubility
c) Dissolution
d) All of the above
11. Solvates are
a) Pseudo morphs
b) Amorphous solids
c) Isomorphs
d) None of the above
12. Rate of hydrolysis of benzocaine can be reduced by complexing with
a) Caffeine
b) PVP
c) Beta cyclodextrin
d) EDTA
13. Positive Deviation from Dalton's Law means
a) Reduced Boiling point
b) Higher melting point
c) Both of the Above
d) None of the above
14. _____ is a measure of its efficiency to induce dipoles in another molecule
a) Dielectric Constant
b) Refractive Index
c) Optical Rotation
d) None of the above

15. this ion pair have highest interaction within
 a) Solvent Shared
 b) Fully Solvated
 c) Contact Ion pair
 d) All of the above
16. For the wetting of a solid by liquids, the contact angle (in degrees) should have a value nearby
 a) 0
 b) 90
 c) 180
 d) 270
17. It is an example of cationic surfactant
 a) Benzalkonium Chloride
 b) Span
 c) Tween
 d) Sodium Lauryl Sulphate
18. Surface tension is defined as the change in the surface free energy per unit change in
 a) Area
 b) Density
 c) Length
 d) Volume
19. Near CMC micelles assume the shape of
 a) cylindrical
 b) layered
 c) rod shaped
 d) spherical
20. Hemolytic Method is used to determine
 a) Iso tonicity
 b) Diffusion
 c) Solubility
 d) Permeability

Q.2 Long Answers (any 2 out of 3) (10 Mark Each)

(20)

1. Write in detail about factors affecting solubility of solid in liquid.
2. Enlist methods used for analyzing complexes. Explain any two Methods.
3. Write a note on colorimetric method of pH determination.

Q.3 Short Answers (any 7 out of 9) (5 Mark Each)

(35)

1. What is spreading co-efficient? Explain.
2. Write a note on liquid crystals.
3. Define & discuss polymorphism.
4. Write a note on aerosols.
5. Write difference between physical & chemical adsorption.
6. Explain equilibrium dialysis method.
7. Define critical solution temperature and explain phenol water system.
8. Write a note on cryoscopic method of measuring tonicity.
9. Write a note on chelates.