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BP 302 T

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**II/IV B. PHARMACY (Supple) DEGREE EXAMINATIONS,
NOVEMBER-2022**

Third Semester

PHYSICAL PHARMACEUTICS - I - THEORY

Time : Three Hours

Maximum : 75 Marks

SECTION - A

Answer any FIVE Questions.

5x10 = 50 M

1. Classify different complexes with examples. Add a note on analysis of complexes by two methods.
2. Explain surface tension and surfactants. Write about measurement of surface tension.
3. Write about Raoult's law, Ideal & real solutions.
4. Discuss the working principle, procedure and applications of refractive index and optical relation.
5. a) Write about factors influencing drug solubility.
b) State and explain distribution law and its limitations.
6. Write a detailed note on spreading coefficient and adsorption Isotherms and its significance.
7. Define a buffer and write about different pH adjusting methods and determination of buffer capacity.

SECTION - B

Answer any FIVE Questions.

5x5 = 25 M

8. Write four applications of drug-protein binding in drug activity.
9. Write about the pH determination by electrometric method.
10. Write about the solubility of gases in liquids and Henry's law.
11. Write a note on dipole moment and its determination.
12. Write about Fick's law of diffusion and its importance in pharmacy.
13. a) Define and classify liquid crystals.
b) Enumerate difference between amorphous and polymorphism.
14. Write a note on
 - a) HLB.
 - b) Solubilization and detergency.



II/IV B.PHARMACY (REGULAR) DEGREE EXAMINATIONS, MAR/APR-2021**Third Semester****B.PHARMACY****PHYSICAL PHARMACEUTICS-I-Theory****Time: Three Hours****Maximum marks:75****SECTION-A****Answer any FIVE Questions****5X10=50M**

1. What are ideal and Non-ideal solutions? Describe the laws proposed and their applications.
2. Classify the complexes? Write in detail about metal complexes.
3. Explain in detail dielectric Constant induced polarization and dipole moment.
4. Write in detail buffer action mechanism and discuss pH determination by Calorimetric method.
5. Describe distribution method determination of stability constants of complexes.
6. Discuss in detail the methods of adjusting toxicity and pH.
7. Write a note on spreading coefficient and derive its equation and discuss solid-liquid Interfaces.

SECTION-B**Answer any FIVE Questions****5X5=25M**

8. List out the factors influencing solubility of gases in liquids.
9. Write a note on HLB. What are methods for estimating HLB.
10. Derive Raoult's law and discuss its limitations.
11. What is surface free energy? Explain how it is related to surface tension.
12. Discuss Fick's first law of diffusion with example.
13. Write four applications of drug-Protein binding in drug activity.
14. Write about Nernst and zeta Potential and give its importance in Pharmaceutical system.



II/IV B.PHARMACY (Supply) DEGREE EXAMINATIONS, OCTOBER-2020

Third Semester

B.Pharmacy

PHYSICAL PHARMACEUTICS-I-Theory

Time: Three Hours

Maximum marks:75

SECTION-A

Answer any FIVE Questions.

5X10=50M

1. Describe the solubility phenomenon of liquids in liquids. Give various methods of expressing concentration.
2. Discuss the methods involved in estimation of complexes.
3. Write in detail different methods for determination of surface tension.
4. What is Isotonicity? Classify and discuss various methods to adjust toxicity.
5. Discuss about different types of refractometers and significance of Refractive Index.
6. Discuss the structure, properties and significance of liquid crystals and polymorphism.
7. Explain phase equilibria for system containing two components and binding forces between molecules.

SECTION-B

Answer any FIVE Questions.

5X5=25M

8. State and explain distribution law. Write its limitations.
9. Write a note on complexation and drug action.
10. What are adsorption isotherms? Discuss about different types of Isotherms.

11. Write a note on Pharmaceutical buffer and their applications in pharmacy.
12. Explain pharmaceutical applications of surfactants according to HLB values.
13. Discuss the phenomena of steady state diffusion.
14. Write a note on Inclusion complexes.



Total No. of Questions :14]

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II/IV B.PHARMACY (Regular) DEGREE EXAMINATIONS, DEC-2019/JAN-2020

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Third Semester

B.PHARMACY

PHYSICAL PHARMACEUTICS-I-Theory

Time: Three Hours

Maximum marks:75

SECTION-A

Answer any FIVE Questions

5X10=50M

1. Discuss indetail about the
 - a) Solubility of gas in liquids.
 - b) Solubility of liquids in liquids.
2.
 - a) Write the importance of propellants in the aerosols.
 - b) Define polymorphism. Mention the importance of polymorphism in preformulation studies.
3. How the refractive index, optical rotation were determined and mention the applications of them.
4. Define adsorption isotherms. What are the different adsorption isotherms. Explain them indetail.
5. Define complexation. Classify the complexes. Discuss indetail about the metal complexes.
6. Derive an equation for the scatchard plot of protein binding studies.
7. Define Isotonicity. Mention the methods for adjusting the isotonicity. Explain any one method indetail.

SECTION-B

Answer any FIVE Questions

5X5=25M

8. Define critical solution temperature. Mention the applications of CST in pharmacy.

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9. Write a note on vapour pressure.
10. Define dielectric constant. Mention the methods to determine dielectric constant and explain any one method briefly.
11. Add a note on wetting phenomenon.
12. Write the applications of complexation in pharmacy. Explain briefly the mechanism involved in Drug-caffeine complex.
13. Write about the thermodynamic treatment of stability constants.
14. What is sorenson's pH scale. How the pH was determined by calorimetric method.



II/IV B.PHARMACY (Supply) DEGREE EXAMINATIONS, AUGUST-2019

Third Semester

B.Pharmacy

PHYSICAL PHARMACEUTICS-I-Theory

Time: Three Hours

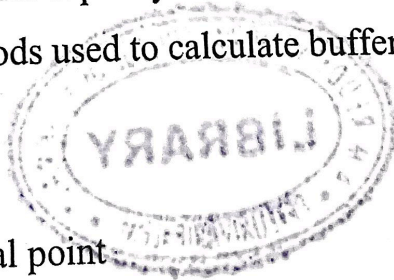
Maximum marks:75

SECTION-A

Answer any FIVE Questions.

5X10=50M

1. What are solid dispersions? Write about phase equilibrium in two component systems containing solid liquid phases?
2. a) Explain factors influencing solubility of drugs?
b) What is critical solution temperature and its significance?
3. Describe the following
a) Quinhydrone complexes
b) Picric acid complexes
4. a) Define Buffer capacity? Discuss equations for estimation of buffer capacity and Maximum buffer capacity?
b) Describe the methods used to calculate buffer capacity.
5. Explain the following
a) Eutectic mixtures
b) Sublimation critical point
c) Liquid complexes
6. Define adsorption isotherms? Draw and explain various types of adsorption isotherms and their behaviour?
7. a) Discuss about the determination of optical Rotation?
b) Explain the concept of dielectric constant?



SECTION-B

Answer any FIVE Questions.

5X5=25M

8. What are real solutions? Mention Raoult's law derivations for real solutions? Explain solvation and association process in solutions of polar compounds?
9. Discuss the importance of Polymorphism in Pharmacy and give examples?
10. Explain Du Nouy ring method for estimation of surface tension?
11. Write a brief note on organic molecular complexes?
12. Discuss the principle and procedure for PH titration method for analysis of complexes.
13. Explain how drug-protein binding influences drug efficacy?
14. Define isotonic solution and add steps for sodium chloride equivalent method of adjusting toxicity?



II/IV B.PHARMACY (Regular) DEGREE EXAMINATIONS, FEB-2019

Third Semester

B.PHARMACY

PHYSICAL PHARMACEUTICS-I

Time: Three Hours

Maximum marks:75

SECTION-A

Answer any FIVE Questions

5X10=50M

1. Discuss in detail about Principles diffusion of drugs through biological membrane?
2. Give a note on following
 - i. Glassy states
 - ii. Latent heats
 - iii. Relative humidity
3. a) What is HLB scale? Write its significance?
b) Give a brief note on surface active agents & spreading co-efficient.
4. a) Discuss about Thermodynamic treatment of stability constants?
b) Write a note pharmaceutical applications of complexation?
5. a) Write the importance of sorensen's pH scale?
b) Describe the calorimetric method for pH determination?
6. a) Define distribution law & add a note on its limitations and applications?
b) What is critical solution temperature and write its applications?
7. Discuss the following
 - a) Inclusion complexes
 - b) Refractive index
 - c) Surface free energy.

SECTION-B

Answer any FIVE Questions

5X5=25M

8. Discuss about liquefaction of gases and methods to achieve liquefaction?
9. Describe the principle involved in detergency process?
10. Discuss about electrical double layer formation with its significance and a neat diagram?
11. Describe the experimental procedure to study drug protein binding?
12. Classify complexes? Add a note on cyclodextrins.
13. Discuss about preparation of pharmaceutical buffer solution?
14. Name the methods used to adjust tonicity and explain anyone method.

