Enrollment No:-_____ Exam Seat No:-_____

C.U.SHAH UNIVERSITY

Summer-2015

Subject Code: 4PS03PHP1 Subject Name: Physical Pharmacy-I

Course Name: B.Pharm Date :5/5/2015

Semester: 3 Marks: 70

Time:2:30 To 5:30

Instructions:

1) Attempt all Questions of both sections in same answer book/Supplementary.
2) Use of Programmable calculator & any other electronic instrument prohibited.
3) Instructions written on main answer book are strictly to be obeyed.
4) Draw neat diagrams & figures (if necessary) at right places.
5) Assume suitable & perfect data if needed.

SECTION I

Q. 1 Attempt all the questions

a) Describe two methods for identifying the type of Emulsion. (2)
b) Define Fick's First law. Write one application of it. (2)
c) What is meant by Protective Colloids? (2)
d) Define Interfacial Tension (1)

Q. 2

a) Write a short note on Stability of Emulsion (5)
b) Explain Noyes-Whitney's equation with diagram (5)
c) Differentiate between Flocculated and Deflocculated suspensions. (4)

OR

a) Write a short note on factors affecting on solubility of gases in liquid (5)
b) Define Sedimentation volume, degree of flocculation and redispersibility. (5)
c) Describe the methods for determining the surface area of powder (4)

Q. 3

a) Explain binding force between molecules (5)
b) Describe in brief Phase rule with an example for one and two component system (5)
c) Write a note on liquid Crystals (4)

OR

Q. 3

a) Define Colloids and discuss its applications in pharmacy (5)
b) Write a note factors affecting on Dissolution. (5)
c) Write a short note on HLB. (4)

SECTION II

Q. 4 Attempt all the questions

a) List out the physical properties of liquid (2)

b) Define suspension. Write two advantages of suspension (2)

c) Define lyophobic colloids and give two examples (2)

d) Surface Tension of water is _____dynes/CM (1)

Q. 5

a) Define polymorphism, enantiotropism, monotropism. Discuss the significance of polymorphism in pharmaceutical practice (5)

b) Differentiate between ideal and real solutions. Explain the influence of foreign substances in solubility of liquids in liquids (5)

c) What is spreading Coefficient? Derive its equation (4)

OR

Q. 5

a) Derive an equation for determination of Surface Tension of a Liquid by capillary rise method. (5)

b) Discuss the factors affecting sedimentation of suspension (5)

c) Discuss the applications of Surface active agents. (4)

Q.6

a) What do you mean by a Glassy state. Explain in brief (5)

b) Explain: Phase rule, Buffer capacity, Partition coefficient (5)

c) Write a note on law of distribution (4)

OR

Q. 6

a) Describe Type 1 dissolution apparatus with a labelled diagram (5)

b) Write a note on Controlled Flocculation (5)

c) Discuss any one Kinetic property of Colloids. (4)