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SB-1141

First Year B. Pharm. Examination

March / April – 2011

PH-101 : Pharmaceutics-I

(Physical Pharmacy)

Time : Hours] [Total Marks : **70**

Instructions :

(1)

નીચે દર્શાવેલ ☛ નિશાનીવાળી વિગતો ઉત્તરવહી પર અવશ્ય લખવી.
Fillup strictly the details of ☛ signs on your answer book.

Name of the Examination :

☛ **F. Y. B. Pharm.**

Name of the Subject :

☛ **PH-101 : Pharmaceutics-1**

☛ Subject Code No. : **1 1 4 1** ☛ Section No. (1, 2,.....) : **1&2**

Seat No. :

Student's Signature

(2) All questions are compulsory.
(3) Figures to the right indicate full marks.
(4) Answer and submit both sections separately.

SECTION - I

1 Attempt any five of the followings : **10**

(a) Define interfacial tension giving its significance.
(b) Describe applications of thixotropy.
(c) Enumerate factors affecting drug dissolution and discuss any one.
(d) Creaming is not instability of an emulsion. True or false justify.
(e) What is polymorphism ? Give its application in pharmacy.
(f) What are Eutectic mixtures ? Give an example.
(g) What is DSC ? Give its application in pharmacy.

2 Attempt any four of the following : **16**

(a) Explain formation of electric double layer with neat labeled diagram.
(b) Discuss Gibb's adsorption isotherm. Write its application.
(c) Describe the sedimentation method for particle size determination.
(d) Write in brief about instability in emulsions.
(e) Discuss Fick's laws of diffusion.
(f) Differentiate flocculated and deflocculated suspensions.

3 Attempt any three of the following : 9

(a) Enumerate the application of amphiphiles in pharmacy.
(b) Write a note on Cup and Bob viscometer.
(c) Explain various types of densities.
(d) Write a short note on liquid crystals.
(e) Discuss the USP dissolution apparatus type 1 with a suitable diagram.

SECTION - II

4 Define the following : (any **eleven**) 11

(a) Gold Number
(b) Sublimation
(c) Polymorphism
(d) Stokes' diameter
(e) Thixotropy
(f) Contact angle
(g) Sedimentation volume
(h) Rheopexy
(i) Colloids
(j) Coefficient of viscosity
(k) CMC
(l) Isotonic solutions
(m) Buffer capacity
(n) Eutectic mixtures
(o) Inclusion complexes.

5 Attempt any three of the following : 12

(a) Write a detail note on chelates with its formation and application.
(b) Enumerate the derived properties of powders. Discuss any one in detail.
(c) Discuss the application of protein binding.
(d) Describe various methods of colloids purification.
(e) Discuss the capillary rise method for determination of surface tension.

6 Attempt any two of the following : 12

(a) Write a brief note on controlled flocculation in suspension.
(b) Define interfacial tension. Discuss method to determine interfacial tension.
(c) Explain DLVO theory with energy curves.