Roll No. | | | | | | | | | | | | | Total No. of Pages : 2

Total No. of Questions : 13

B.Pharma (2017 Batch) (Sem.–3)

PHYSICAL PHARMACEUTICS-I

Subject Code : BP-302T

Paper ID : [75106]

Time : 3 Hrs. Max. Marks : 75

INSTRUCTIONS TO CANDIDATES :

1. **SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.**
2. **SECTION-B contains THREE questions carrying TEN marks each and student has to attempt any TWO questions.**
3. **SECTION-C contains NINE questions carrying FIVE marks each and student has to attempt any SEVEN questions.**

SECTION-A

1. Answer briefly :

a) What is meant by intrinsic solubility?

b) State Raoult's Law and its applications.

c) What is meant by distribution coefficient?

d) What is latent heat and specific heat?

e) What is relative humidity?

f) Mention the important properties of an amorphous solid.

g) What is dielectric constant and its application?

h) Define HLB value and its scale.

i) What are clathrates? Give two examples.

j) What is indicator constant?

SECTION-B

2. What is an 'Ideal Solution'? Differentiate between complete miscibility and partial miscibility phenomena taking suitable examples.

3. Discuss the pH titration method for determination of stoichiometric ratio in a complex.

4. Differentiate between surface tension and interfacial tension. With the help of suitable equations explain spreading of one liquid on another liquid.

SECTION-C

5. Discuss the calculation of buffer capacity and its significance.

6. A 100 ml solution of ephedrine sulphate is to be made isotonic. How much dextrose should be added for this purpose? (Given : 'E' value of ephedrine sulphate is 0.23 and of dextrose is 0.16).

7. What are amorphous and crystalline solids? Give examples of polymorphism and highlight the advantages and disadvantages of polymorphic behavior of solids.

8. Explain self-association phenomena.

9. Classify surfactants and write a note on detergency.

10. Write a note on dissociation constant and its significance.

11. What is glassy state of a solid? Explain the properties of such a solid and its significance in dosage form performance.

12. Differentiate between solvation and association with examples.

13. Briefly discuss the factors influencing the solubility of drugs.