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Total No. of Pages : 02

Total No. of Questions : 13

B.Pharma (2017 & Onward) (Sem.-3)

PHYSICAL PHARMACEUTICS-I

Subject Code : BP-302T

M.Code : 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. Define briefly :

- a) Distinguish between solvation and association giving one example each.
- b) State Raoult's Law and its applications.
- c) What is meant by diffusion?
- d) What is a liquid crystal? Give an example and mention its applications.
- e) What is dipole moment?
- f) Mention the important properties of an amorphous solid.
- g) What is interfacial tension?
- h) Define HLB value and its scale.
- i) What are chelates? Give two examples.
- j) What is buffer capacity?

SECTION-B

2. Discuss the factors influencing the solubility of drugs. Write a note on approaches used for enhancing drug solubility.
3. Discuss the distribution 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 relationship between vapour pressure and critical point.
6. The following eye drop has to be prepared: Naphazoline HCl (0.02%), Zinc sulphate (0.25%), P. water qs 30 ml. How much sodium chloride should be added to make the preparation isotonic with tears. (Given 'E' value of Naphazoline HCl is 0.27 and that of Zinc sulphate is 0.15).
7. What are amorphous and crystalline solids? Give examples of polymorphism and highlight the advantages and disadvantages of polymorphic behavior of solids.
8. Explain aerosols and their ingredients.
9. Write a note on surfactants and their applications in formulation design.
10. Write a note on dissociation constant and its significance.
11. Comment on glassy state of a solid with respect to its advantages in dosage form performance.
12. Give a brief description of buffers and their applications.
13. Briefly discuss isotonicity and the methods used for preparing isotonic solutions.

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.