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Total No. of Pages : 02

Total No. of Questions : 10

B. Pharma (2011 to 2016) (Sem.-4)

PHARMACEUTICS-V**(Physical Pharmacy)**

Subject Code : BPHM-405

M.Code : 46235

Time : 3 Hrs.

Max. Marks : 80

INSTRUCTION TO CANDIDATES :

1. SECTION-A is COMPULSORY consisting of FIFTEEN questions carrying TWO marks each.
2. SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.
3. SECTION-C contains FOUR questions carrying TEN marks each and students have to attempt any THREE questions.

SECTION-A**1. Answer briefly :**

- a) What are the components of an aerosol system?
- b) What is an amorphous solid?
- c) Define particle volume.
- d) Define loose and close packing of particles.
- e) What is meant by solubilization? Give two examples.
- f) Differentiate between Zeta and Nernst potential.
- g) What is plastic viscosity? Give one example.
- h) What is angle of repose and what does it indicate?
- i) What is spreading coefficient?
- j) What are cage complexes?
- k) Give two examples of wetting agents.



- l) Mention the formulae for calculating half life of drugs following degradation by first order.
- m) Mention the Arrhenius equation and its utility.
- n) What is contact angle?
- o) What is the HLB scale of hydrophobic surfactants?

SECTION-B

- 2. Define polymorphism with suitable examples. Briefly write about polymorphic behaviour of solids and its impact on formulations.
- 3. What is the difference between work of cohesion & work of adhesion? How spreading coefficient is determined?
- 4. What is thixotropy and anti-thixotropy? Give examples and explain the use of these properties of polymers in dosage form design.
- 5. Enumerate and explain the methods used for determining particle volume.
- 6. Discuss the stability indicating parameters for emulsions.

SECTION-C

- 7. Classify complexes with suitable examples. Comment on the advantages and disadvantages of complex formation in influencing drug stability and effectiveness.
- 8. Describe the difference between a deflocculated and flocculated suspension. Discuss the role of structured vehicles in formulating a physically stable suspension.
- 9. Distinguish between pseudoplastic and dilatant viscosities. Giving suitable examples explain their role in dosage form design.
- 10. Explain the need for eye drops to be isotonic with tears. Enumerate the methods employed for adjusting tonicity of eye drops. Discuss the sodium chloride equivalent method.

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.