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Total No. of Pages : 02

Total No. of Questions : 10

B. Pharma (2012 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 eutectic mixtures? Explain with examples.
- b) What is polymorphism? Explain with examples.
- c) Define Angle of repose. What are its uses in the pharmaceutical field?
- d) Write Stokes' equation. What are its applications in pharmacy?
- e) Write the equation for the spreading coefficient. Suggest two methods to improve the spreading of a medicament.
- f) Explain the concept of surface tension.
- g) Define Thixotropy. Draw a thixotropic curve for a plastic flow.
- h) What type of viscometers is necessary for the study of non-Newtonian fluids? Why?
- i) What is Brownian movement? Which formulations exhibit this movement?
- j) What is meant by protective colloids? Mention one example for the same.
- k) Explain the term "phase inversion" with one suitable example.

- l) What is Scatchard plot? Give a labeled plot with a suitable example.
- m) Define First order reaction. List the examples which have applications in biological processes.
- n) Define Half-Life. What relationship does the half-life period bear to the initial concentration?
- o) What is buffer capacity?

SECTION-B

- 2. List different types of densities of powders/granules. Write the experimental method for the determination of any one of them.
- 3. Draw the flow curves for Newtonian and non-Newtonian types of flow. Give one example for each type of flow.
- 4. Deduce an equation for the determination of interfacial tension using DuNouy method.
- 5. Describe the process of micellar solubilization. Explain its applications in pharmacy with suitable examples.
- 6. How does complexation influence drug action? Explain with help of two examples.

SECTION-C

- 7. Compare first and second order reactions with respect to the rates and explain the mechanism for their behaviour.
- 8. Discuss the methodology of accelerated stability studies. Mention its limitations.
- 9. Explain with relevant mathematical equation, give the construction, working and applications of cup and bob viscometer. What are its disadvantages?
- 10. What is meant by controlled flocculation? Discuss the various means by which controlled flocculation can be achieved.

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.