

BACHELOR OF PHARMACY (B. PHARM.) (CBCS-2019 COURSE)

B. Pharm. Sem-IV :SUMMER- 2022

SUBJECT : PHYSICAL PHARMACEUTICS-II

Day : Friday

Time : 02:00 PM-05:00 PM

Date : 19-08-2022

S-20672-2022

Max. Marks : 75

N. B. :

- 1) All questions are **COMPULSORY**.
 - 2) Figures to the right indicate **FULL** marks.
 - 3) Answers to both section should be written in **SEPARATE** answer books.
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SECTION – I

Q. 1 Answer all questions: **(20)**

- a) What is Brownian movement?
- b) Define kinematic viscosity along with its units of expressions.
- c) Define sedimentation volume and degree of flocculation.
- d) Enlist various equivalent diameters?
- e) What is bulk density and true density?
- f) Define pseudo zero order reaction with example.
- g) Define Hardy-Schulze rule. What are its applications?
- h) What are Bingham bodies? Give its examples.
- i) How are pharmaceuticals stabilized against oxidation?
- j) Classify different types of emulsions.

Q. 2 Answer **ANY TWO** out of **THREE** of the following: **(20)**

- a) Classify fluids based on Newton's law and explain non-Newtonian flow of fluids.
- b) Explain in detail interfacial properties of suspended particles. Add a note on structured vehicle.
- c) Give expressions for rate constant and half-life of first order reaction. Explain any two methods of determination of order of reaction.

SECTION – II

Q. 3 Answer **ANY SEVEN** out of **NINE** of the following: **(35)**

- a) Explain the kinetic properties of colloids.
- b) Explain the mechanism of thixotropy with examples.
- c) Describe the principle and types of cup and bob viscometer.
- d) Describe methods of powder flow properties determination.
- e) Explain deformation of solids.
- f) How emulsions are prepared by HLB method?
- g) Brief on-methods of preparation of different types of colloids.
- h) Explain sieve analysis for particle size analysis.
- i) Describe Accelerated stability studies.

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