# BACHELOR OF PHARMACY (B. PHARM.) (CBCS-2019 COURSE)
## B. Pharm. Sem-IV : WINTER- 2022
## SUBJECT : PHYSICAL PHARMACEUTICS-II

Day : Tuesday | Time : 02:00 PM-05:00 PM

Date : 24-01-2023 | **W-20672-2022** | Max. Marks : 75

**N.B.**

1) All questions are **COMPULSORY**.
2) Figures to the **RIGHT** indicate **FULL** marks.
3) Answer to both sections should be written in **SEPARATE** answerbook.

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### SECTION – I

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

**a)** What is gold number? Give its examples.
**b)** Differentiate between lyophilic and lyophobic colloid.
**c)** Define pseudo first order reaction with example.
**d)** Enlist different measures to protect drugs against photodegradation.
**e)** Enumerate working principle of Andreasen pipette.
**f)** Write formula for Carr's Index and Hausner ratio.
**g)** Differentiate between creaming and cracking.
**h)** Define sedimentation volume and give its significance.
**i)** Enlist Heckel equation. Give its significance.
**j)** Comment on dilatant fluids.

**Q.2** Answer **ANY TWO** from the following : **(20)**

**a)** Define Viscosity. Classify different viscometers with examples. With the help of neat diagram explain the principle and working of cone and plate viscometer.
**b)** Explain in detail interfacial properties of suspended particles. Discuss suspension instabilities and their preventive measures.
**c)** Give expressions for rate constant and half-life of zero order reaction. Describe any two methods of determination of order of reaction.

### SECTION – II

**Q.3** Answer **ANY SEVEN** from the following: **(35)**

**a)** Explain the kinetic properties of colloids.
**b)** Write a note on thixotropy.
**c)** Explain optical microscopy for particle size analysis.
**d)** Describe the principle and types of cup and bob viscometer.
**e)** How are emulsions prepared by HLB method?
**f)** Describe methods of flow properties determination.
**g)** Explain deformation of solids.
**h)** Write a note on preparation of different types of colloids.
**i)** Describe accelerated stability studies.

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