

**BIRLA INSTITUTE OF TECHNOLOGY AND SCIENCE, PILANI**  
**SECOND SEMESTER 2022-23**

**PHA F216: Pharmaceutical Formulation I**

**Maximum marks: 25**

**Mid-Term Examination (Closed Book)**

**Weightage: 25%**

Date: 01 May 2023

Duration: 90 min

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**Note: Write answers in the sequence of the questions.**

**Q1.** Discuss briefly (a) Enemas; (b) Douches; (c) Ear Drops; (d) Elixirs; (e) Syrup. [5M]

**Q2. (a)** One eye drop monophasic solution was prepared. You need to filter it. Suggest the suitable filtration process for this preparation. Suggest any four approaches to accelerate the filtration rate for solution preparations? [3M]

**(b)** Write name of (any 8) different types of 'liquid oral dosage forms'. (Not drug name/ not brand name). [2M]

**Q3. (a)** Define poorly soluble and sparingly soluble compound. Discuss briefly any two approaches for enhancement of solubility during solution preparation. [2M]

**(b)** As formulation scientist, you have prepared a suspension preparation. You observed fast sedimentation of suspended particles. How will you reduce the sedimentation rate? Give your answer with proper justification. [3M]

**Q4. (a)** Write advantages of paracetamol suspension compared to its Tablet dosage form. [2M]

**(b)** Write composition of a flocculated suspension with two examples of each category of additives. [2M]

**(c)** A 100 ml suspension showed 60 ml and 20 sediment height after 2 hr and 6 hr respectively. Determine the sedimentation volume of this suspension. (Assume the suspension was uniformly dispersed at the beginning) [1M]

**Q5. (a)** Write the ideal formulation properties/characteristic for nasal drops preparation. Write the rational/justification to have these properties. [3M]

**(b)** A 'monophasic solution' formulation showed precipitation after few days of its preparation. Suggest the possible reasons this. [2M]