**Roll No:**

# BPHARM
## (SEM III) THEORY EXAMINATION 2023-24
## PHYSICAL PHARMACEUTICS I

**TIME: 3 HRS**                                                  **M.MARKS: 75**

**Note:**  **1.** Attempt all Sections. If require any missing data; then choose suitably.

## SECTION A

**1.**       **Attempt *all* questions in brief.**                        **10 x 2 = 20**

| | |
|---|---|
| a. | What do you mean by glassy state? |
| b. | What are real and ideal solutions? |
| c. | What are chelates? |
| d. | Write note on inclusion complexes. |
| e. | Write any two applications of buffer isotonic solution in pharmacy. |
| f. | What is Henderson -Hasselbach equation? Write its two applications in pharmacy. |
| g. | What is ideal solubility parameter? |
| h. | Define solvation and association. |
| i. | Differentiate between crystalline and amorphous solid. |
| j. | What is interfacial tension? Write its unit and formulae. |

## SECTION B

**2.**       **Attempt any *two* parts of the following:**                **2 x 10 = 20**

| | |
|---|---|
| a. | Define Refractive Index. Discuss in detail about working of Abbe's Refractometer. |
| b. | Define surface tension. Explain in detail measurement of surface tension by capillary rise method |
| c. | Explain in detail factors affecting solubility of drug. |

## SECTION C

**3.**       **Attempt any *five* parts of the following:**               **7 x 5 = 35**

| | |
|---|---|
| a. | Explain real solutions with examples and graph. |
| b. | Write short note on complexation. |
| c. | Write short note on critical solution temperature and its applications. |
| d. | Describe the determination and applications of dipole moment. |
| e. | Write short notes on glassy state and liquid crystals. |
| f. | Discuss diffusion mechanism in biological system with examples. |
| g. | Describe the Griffin's HLB scale in detail along with its determination method. |