PAPER ID-421615

Roll No: | | | | | | | | | | | |

BPHARM
(SEM III) THEORY EXAMINATION 2021-22
PHYSICAL PHARMACEUTICS I

Time: 3 Hours   *Total 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.	Write about solubility parameters.
b.	Outline the mechanism of association and solvation.
c.	Write about latent heat and vapor pressure.
d.	State the equation for relative humidity.
e.	Explain eutectic mixtures.
f.	Differentiate between diffusion and osmosis.
g.	Define index of refraction.
h.	Describe the sublimation process.
i.	Enlist limitations of distribution law.
j.	Define Sorensen's pH scale.

SECTION B

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

a.	Explain various factors affecting the solubility of solids in liquids. Discuss Hildebrand solubility parameter.
b.	Describe the classification of complexation. Discuss chelates and cyclodextrin complexes with their application in pharmacy.
c.	Define tonicity. Differentiate between isosmotic and isotonic solutions. Describe the methods that are used to adjust pH and tonicity.

SECTION C

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

a.	Describe the determination and applications of dipole moment and dissociation constant.
b.	Discuss in detail Raoult's law with its deviation.
c.	Express the different methods used for analysis of drug-protein binding. Explain the kinetic theory of protein binding.
d.	Explain critical solution temperature and its applications using suitable examples.
e.	Define buffered isotonic solution. Describe methods of adjustment tonicity.
f.	What are different methods of determining surface tension? Discuss the construction, working, and principle of capillary rise method.
g.	Describe determination and applications of dipole moment and dissociation constant.