DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE

End Semester Examination – Winter 2022

Date: 13/02/2023
Course: Second Year B. Pharmacy
Subject Name: Physical Pharmaceutics I
Max Marks: 75
Sem: III
Subject Code: BP302T
Duration: 3 Hr.

Instructions:

1. All questions are compulsory
2. Draw diagrams / figures wherever necessary
3. Figures to right indicate full marks

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Q. 1. Objective Type Questions (Answer all the questions) **(10 x 2) = 20**

i) Give any four ways to express solubility of a drug.

ii) Define critical solution temperature. Give its applications.

iii) Define – desublimation, polymorphism, vapour pressure, latent heat

iv) Differentiate crystalline and amorphous solid.

v) Why interfacial tension is less than surface tension?

vi) Explain HLB scale.

vii) Give pharmaceutical applications of complexation.

viii) Give importance of protein binding.

ix) Write buffer equation and buffer capacity.

x) Define isotonic solution and paratonic solution.

Q. 2. Long Answers (Answer 2 out of 3) **(2 x 10) = 20**

i) Write in detail about Raoult's law with help of following point,
a) statement of law, b) ideal solution and real solution,
c) positive deviation d) negative deviation

ii) Describe refractive index property of drug molecule. Explain various refractometers used to determine refractive index in detail.

iii) Describe in detail methods of analysis of complex.

Q. 3. Short Answers (Answer 7 out of 9) **(7 x 5) = 35**

i) Explain in detail various factors affecting solubility of gases in liquid.

ii) What is liquid crystal? Write its classification with properties of it. Give its applications.

iii) Define aerosol dosage form. Give its merit and demerits. Explain propellant used in aerosol.

iv) Explain spreading coefficient along with applications.

v) Describe in detail about capillary rise method for determination of surface

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