Total No. of Questions : 6]

SEAT No. :

P1438

[Total No. of Pages : 2

[5049]-301
S.Y. B.Pharmacy
PHYSICAL PHARMACEUTICS-I
(2013 Pattern) (Semester-III)

Time : 3 Hours] *[Max. Marks : 70*

Instructions to the candidates:

1) ***All questions are compulsory.***
2) ***Answers to the two Sections should be written in separate answer books.***
3) ***Neat diagrams must be drawn wherever necessary.***
4) ***Figures to the right indicate full marks.***

SECTION-I

Q1) What are different methods used for liquefaction of gases? With neat and labelled diagram describe principle involved in three phase systems of aerosols. **[10]**

OR

Describe in detail two component systems with suitable example. **[10]**

Q2) Attempt any Five of the following. **[15]**

a) Define polymorphism. Give different applications of polymorphism with examples.
b) Explain: Critical gas constants.
c) Describe crystal forms and Lattice angle as crystal parameters.
d) Give pharmaceutical applications of phase rule.
e) What is compressibility factor? Explain giving its importance.
f) Discuss deviations from gas theory.
g) Explain glass transition temperature with example.

Q3) Write short notes on :(any Two) **[10]**

a) Vander Waals equation for real gases.
b) Methods of crystal analysis.
c) Claude's process for liquefaction of gases.
d) Terms involved in Gibbs Phase rule.

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SECTION-II

Q4) Discuss solubility of solids in liquids and factors affecting it. **[10]**

OR

State the Raoult's law of lowering of vapour pressure. Explain deviation from Raoult's law. Add a note on Ebullioscopic method. **[10]**

Q5) Answer the following (any Five) **[15]**

a) Give applications of distribution phenomenon in Pharmacy.

b) Differentiate between real and ideal solution.

c) State Kohlrauschs law and its applications.

d) What is solubility parameter? Give its significance.

e) Explain solubility of liquid in liquid.

f) Give a note on colligative properties of electrolytes.

g) Define and differentiate between equivalent conductance and specific conductance.

Q6) Write short notes on (any Two). **[10]**

a) Solubility of liquids in liquids.

b) BCS classification.

c) Osmotic pressure as a colligative property.

d) First law of thermodynamics.

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