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Total No. of Pages : 02

Total No. of Questions : 09

B.Sc. (Non Medical) (2018 Batch) (Sem.-2)

PHYSICAL CHEMISTRY-I

Subject Code : BSNM202-18

M.Code : 76300

Time : 3 Hrs.

Max. Marks : 50

INSTRUCTIONS TO CANDIDATES :

1. SECTION-A is COMPULSORY consisting of TEN questions carrying ONE marks each.
2. SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.
3. SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.

SECTION-A

1) Write briefly :

- a) What is the degree of dissociation?
- b) Explain the osmosis law of osmotic pressure.
- c) What is Boyle's law?
- d) Express the value of "R" in different units.
- e) Differentiate between osmosis and diffusion.
- f) What is the units of viscosity?
- g) What is Hardy Schulze law?
- h) Explain the law of corresponding states.
- i) What is difference between activity and fugacity?
- j) What is effect of temperature on molality and morality?

SECTION-B

- 2) What are the units of vander waal's constants "a" and "b"? What is their significance?
- 3) Calculate the compressibility factor of a vander waal's gas at critical point.
- 4) What is Raoult's law and explain with derivation?
- 5) Explain the emulsions and its types.
- 6) Explain the viscosity and effect of temperature on viscosity of liquid.

SECTION-C

- 7) What are the postulates of kinetic theory of gases? How are these postulates justified?
- 8) Define surface tension. Describe one method for determining surface tension of a liquid.
- 9) Define the Raoult's law and give an expression for total vapour pressure in terms of mole fraction of components in the vapor phase.

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.