

Roll No.

Total No. of Pages : 02

Total No. of Questions : 09

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

PHYSICAL CHEMISTRY-I

Subject Code : BSNM-202-18

M.Code : 76300

Date of Examination : 07-07-22

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) Answer briefly :

- a) What is the nature of the gas constant R?
- b) Explain the osmosis law of osmotic pressure.
- c) What is meant by kinetic energy of a molecule?
- d) What are colligative properties?
- e) What is ideal solution?
- f) Why viscosity of a liquid decreases with increase in temperature?
- g) What is gold number?
- h) Explain the law of corresponding states.
- i) Explain the emulsion.
- j) What is the critical temperature?

SECTION-B

- 2) What are the units of Vander Waal's constants "a" and "b"? What is their significance?
- 3) Explain the elevation of boiling point.
- 4) Explain the optical properties of sols.
- 5) Explain the emulsions and its types.
- 6) Explain the surface tension and effect of temperature on surface tension of liquid.

SECTION-C

- 7) Drive the expression of Kinetic theory of gases on the basis of postulates.
- 8) Define surface tension? Describe one method for determining surface tension of a liquid.
- 9) Explain the thermodynamics derivation of relation between molecular weight and elevation in boiling point.

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.