CHEMISTRY-11	Chapter#09-First Half (9.0 - 9.4) Test-4		
	Name:	Class:	ID:
Date: / /	**Marks Total: 30**	**Marks Obtained:**	
Time Allowed: 50 Min.			

Maximum Marks: 10 **(OBJECTIVE TYPE)** Time Allowed: 10 Min.

NOTE: Tick The Correct Option:

1. **18 g glucose is dissolved in 90 g water. The relative lowering of Vap. pressure is equal to:**
   (a) 1/5 (b) 5.1 (c) 1/51 (d) 6
2. **Which one of the following pair of liquids is not completely miscible?**
   (a) Alcohol and Ether (b) Benzene and Cyclohexane
   (c) Phenol ad Water (d) Alcohol and water
3. **The molarity of water is minimum at:**
   (a) 0°C (b) 25°C (c) 4°C (d) 100°C
4. **Which one is the example of completely immiscible liquids?**
   (a) Alcohol + Ether (b) Phenol + Water
   (c) Nicotine + Water (d) Water + CS_2
5. **The relative lowering of vapour pressure is independent of:**
   (a) Nature of the solute (b) Temperature
   (c) Concentration of solute (d) Both 'a' & 'b'
6. **Which solution will cause greater lowering of vapor pressure?**
   (a) 10% w/w glucose solution (b) 10% w/w sucrose solution
   (c) 10% w/w urea solution (d) All will cause equal lowering of V.P.
7. **What is not true for an ideal solution?**
   (a) It distills with a change in composition.
   (b) It distills without a change in composition.
   (c) It does not boil at a constant temperature.
   (d) Both 'b' & 'c'
8. **Which liquid mixture can't be separated by fractional distillation?**
   (a) Methyl alcohol-water (b) Ethyl alcohol- water
   (c) Benzene- ether (d) Chlorobenzene-bromobenzene
9. **Which statement is correct for azeotropic mixture of two liquids showing negative deviations?**
   (a) Its vapor pressure is less than that predicted by Raoult's law.
   (b) Its boiling point is less than either of the two liquids.
   (c) Its enthalpy of solution is negative.
   (d) Both 'a' & 'c'
10. **Which solution will boil at a higher temperature than the B.P of both the liquids:**
    (a) Benzene-ether (b) Methanol-water (c) Ethanol-water (d) Water-HCl

Maximum Marks: 20 **(SUBJECTIVE TYPE)** Time Allowed: 40 Min.

SECTION-I

Q.2: Give brief answers to the following questions: (12)

i. The concentration in terms of molality is independent of temperature but molarity depends upon temperature. Why?

ii. 100 g of 98% H_2SO_4 has volume of 54.34 cm^3 of H_2SO_4 (density = 1.84 g cm^{-3}). Explain with reason.

iii. The total volume of the solution by mixing 100 cm^3 of water with 100 cm^3 of alcohol may not be equal to 200 cm^3. Justify.

iv. Define critical solution temperature or the upper consulate temperature.

v. What is Raoult's law? Give its three definitions with mathematical expressions.

vi. What is positive deviation from Raoult's law?

SECTION-II

NOTE: Attempt All Questions: (08)

Q.3: Define the following terms: i) Mole fraction ii) Molarity iii) Parts per million iv) Hydration.

Q.4: Explain Raoult's law when both components in the solution are volatile.