



March 10 - 14, 2020

TEST I.

Directions: Write **TRUE** if the statement conveys truth, if **FALSE** change the underlined word/s that makes the statement incorrect. (10 points)

1. Solvent carries more energy in a solution rather than the solute.
2. Molality is a solution of number of moles of a solute contained in a volume of solution in liters.
3. Phase change is characterized by the changes in molecular order.
4. Solids, liquids, and gases differ in distances between particles, in the freedom of motion of particles, and in the extent to which the particles interact.
5. It is an unsaturated solution which contains less solute than a saturated solution.
6. Intermolecular Forces hold atoms together in a molecule.
7. Dipole-dipole forces exist between polar and nonpolar molecules.
8. The forces between particles of molecular solid are electrostatic attractions.
9. Water has low boiling point which is why it is liquid in room temperature.
10. Metallic bonds consist of atoms or ions particles only.

TEST II.

Directions: Answer the following briefly. (10 points)

1. Explain briefly the difference between amorphous and crystalline solid.
2. Draw and explain the structure of water and ice.
3. Discuss the different factors that affect solubility.

TEST III.

Directions: Solve the following problems. Show your solutions and box your final answer. (20 points)

1. Fifty grams of rosin, 20g of beeswax, and 25g of shellac are heated in a metal pan to produce benzene soluble cement. Calculate the percentage by mass composition of the cement.
2. Calculate the molarity of a 12L solution containing 318g of sodium carbonate (Na_2CO_3)
3. A solution is made by dissolving 20g of NaCl in 60g of water. The volume of the resulting solution is 55 mL. Calculate the following.
 - a. Molality
 - b. Molarity
 - c. Mole fraction
 - d. Mass%
 - e. Density of the solution

**NOTE: WRITE YOUR ANSWERS IN A 1 WHOLE SHEET OF PAPER. CAPITAL LETTERS ONLY.
SUBMIT YOUR WORK WHEN CLASSES RESUME.**



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TEST I.

Directions: Draw the following circuit symbols and write their functions. (20 points)

	Circuit Symbol	Function
1. Resistor		
2. Fuse		
3. DC Circuit		
4. Transformer		
5. AC Circuit		
6. Ground		
7. Switch (Open)		
8. Switch (Close)		
9. Inductor		
10. Battery		

TEST II.

Directions: Complete the table. Rely on the rule of Parallel Circuit (10 points)

R_1	R_2	R_3	TOTAL	
			9V	Voltage
9A				Current
	2Ω			Resistance

TEST III.

Directions: Differentiate the Series Circuit and Parallel Circuit in terms of Voltage, Current, and Resistance
Write your answers on the space provided. (10 points)

Series Circuit	Parallel Circuit

NOTE: WRITE YOUR ANSWERS IN A BOND PAPER. SUBMIT YOUR WORK WHEN CLASSES RESUME.