

## TEST 1 – MATTER

### PART A MULTIPLE CHOICE – CIRCLE THE CORRECT ANSWER (1 POINT EACH)

1. The smallest particle of a substance that can be identified as that substance is a(n)
  - a. mixture.
  - b. compound.
  - c. element.
  - d. atom.
2. Which of the following is not a physical change?
  - a. Heating sugar to make caramel.
  - b. Boiling water to make steam.
  - c. Freezing water to make ice.
  - d. Melting ice to make water.
3. Which is a good example of chemical change?
  - a. Freezing water to make ice.
  - b. Melting ice to make water.
  - c. Heating sugar to make caramel.
  - d. Boiling water to make steam.
4. Matter that can not be easily separated into its components is a(n)
  - a. mixture.
  - b. compound.
  - c. element.
  - d. atom.
5. Immiscible substances
  - a. cannot be separated.
  - b. can be separated by filtering.
  - c. can be separated by boiling to dryness.
  - d. Can be separated by magnetism.

### PART B FILL IN THE BLANK (1 POINT EACH)

6. When a gas changes to a liquid, \_\_\_\_\_ occurs.
7. A \_\_\_\_\_ has no definite volume or shape.
8. Odor and luster are examples of \_\_\_\_\_.
9. A mixture in which the components are evenly mixed is \_\_\_\_\_.
10. A \_\_\_\_\_ change produces a new substance.

**PART C MATH – SHOW ALL WORK (4 POINTS EACH)**

11. If a liquid has a volume of 260mL and a mass of 840g, what is its density?
12. If the density of brass is  $8.40\text{g/cm}^3$ , what is the volume of a 150g sample?
13. If the density of aluminum is  $2.70\text{g/cm}^3$ , what is the mass of a brick whose dimensions are 10.0cm long, 5.0cm high, and 5.0 cm wide?
14. Find the mass of a copper sample that displaces 23.4mL of water, if the density of copper is  $8.92\text{g/cm}^3$ .
15. Which is more dense, a 96.5g sample of gold that displaces 5.00mL of water, or a 79.4g sample of plutonium that displaces 4.00mL of water?

**PART D SHORT ANSWER (4 POINTS EACH)**

16. How would you separate a mixture of sand and water?

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17. How would you separate a mixture of salt and iron filings?

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18. What is the difference between ice melting and iron rusting?

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19. List two physical properties.

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20. List two chemical properties.

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**→ STOP AND CHECK YOUR WORK**

