

**Chapter 7**

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1. Matter is anything that takes up space and has mass.
2. True.
3. Students may skip this question. Question 3 was included in the textbook by mistake.
4. False.
5. True.
6. False.
7. The single atom of oxygen contains less matter.
8. Protons, neutrons and electrons.
9. Because molecules can be broken down into even smaller whole units, called atoms. Another way to write that is that molecules are built from atoms bonding to one another and so the atom is the smallest whole building block of matter.
10. Atoms, molecule.
11. Solid, liquid and gas.
12. False.
13. A liquid's.
14. True.
15. Gas and liquid.
16. A gas can be compressed more than a liquid or solid because the atoms/molecules of a gas are further apart than those of a liquid or solid.
17. An element is composed of atoms of only one type; it is purely only one type of atom. A compound is composed of two or more elements bonded together in a fixed ratio.
18. Solid, gas, liquid.
19. A compound.
20. A mixture.
21. False.
22. False (pure water is a compound).
23. A compound is not purely atoms of one element. It is made up of atoms of two or more elements, whereas an element is made up of atoms of only one element.
24. The phase of the matter and the composition of the matter.
25. False.
26. True.
27. True.
28. Because neon glowing does not change the composition of neon. It is neon gas before it is electrified and glows, and it is neon gas after it is electrified and glows. Since no chemical change occurred to the gas when it was electrified, that means there was no chemical change/no change in its composition. If the student answers, "Because its composition doesn't change" that is fine.
29. True.
30. True, a chemical reaction has occurred. The starting stuff on the left isn't the same as the end stuff on the right. That is really the only point to this question. It is not relevant to know what those substances are because it is obvious that the starting compounds are not the same as the ending compounds since they are different.

**A prior printing of the Fundamentals of Chemistry Textbook included a different question 3 and 30 total questions. All other questions remained the same. If your version of the Textbook includes 30 questions for Chapter 7, you can use this Answer Key page for easier grading.**