

Time

15 minutes

Questions

- 1) All matter is composed of _____.
- 2) The four phases of matter are _____, _____, _____, _____.
- 3) One Greek philosopher that first used the word "atom" is _____.
- 4) Early scientists believed that everything around them consisted of what 4 elements?
- 5) With one exception, what are the three main components of all atoms?
- 6) Which atom is the exception to the last question? Which component is missing?
- 7) What is an ion?
- 8) Heat is created by submitting an atom or a group of atoms to what mechanical process?
- 9) Neutrons and protons bind together to form the atom's _____.
- 10) An electron is how large compared to a proton?
- 11) An electron resides in one of the atom's _____.
- 12) If you increased the hydrogen atom's nucleus to a circumference of 3mm, how large is the new hydrogen atom?
- 13) The sun's plasma consists mostly of the ions of what two elements?
- 14) When we touch something, what actually comes into contact with what?

- 15) What scientist discovered that atoms consisted mainly of a perfect vacuum?
- 16) What is a molecule?
- 17) Name one example of a molecule and state how many atoms are in it.
- 18) How fast does light travel through a vacuum?
- 19) Name two forms of electromagnetic radiation that are capable of ionizing the atoms in a human cell.
- 20) What was Einstein's famous formula?
- 21) What do the symbols in Einstein's formula stand for?
- 22) How is light created?
- 23) What thermonuclear force creates the tremendous heat in the core of the sun?
- 24) What is fusion?
- 25) What thermonuclear reaction is the opposite of fusion?

Bonus question: The sun produces what two things that threaten the astronauts?