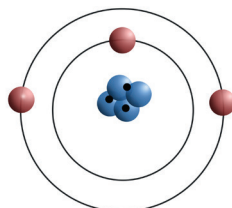


**STUDY QUESTIONS**

1. Name the three subatomic particles.
2. Which subatomic particle(s) is/are in the nucleus?
3. What is wrong with the atomic model below?

● Neutron ● Proton • Electron



4. List the 5 basic components of atomic theory.
5. True or False: although an atom is made from smaller subatomic particles, it is said to be the smallest "whole" building block of all matter.
6. Who do we credit with first proposing modern atomic theory?
7. Who discovered the electron?
8. List two great contributions that Ernest Rutherford made to atomic theory.
9. True or False: the cathode is the positively charged terminal (or "plate") of a cathode ray tube.
10. What is the purpose of the tiny hole in the anode plate in a cathode ray tube?
11. What happens when electrons hit phosphor in a cathode ray tube?
12. Why was the beam of electricity deflected (or bent) in the cathode ray tube in J.J. Thomson's experiment?
13. Draw an example of the plum pudding model and describe why it isn't quite a correct representation of the atom (make sure to label the areas of the model).
14. Describe the basic set up of Rutherford's gold foil experiment and why it worked to prove that the atomic nucleus existed.
15. True or False: since it comes from a different type of atom, a gold electron is different than an oxygen electron.
16. True or False: If you were able to pluck one neutron from a carbon atom and one neutron from a helium atom, you would be able to "switch" them and put the helium neutron into the carbon nucleus and the carbon neutron into the helium nucleus because all neutrons are the same regardless of from which atom they come.
17. True or False: an individual proton's charge is much greater than an individual electron's charge because the proton is so much larger than the electron.
18. True or False: protons are charged positively, and electrons are charged negatively.
19. How much larger are protons and neutrons compared to electrons?