Chapter 25: Modern Physics

PRINT Name _____ Period _____

1. Discuss Five Evidences for the Atomic Theory.
2. List four things that Sir William Crookes discovered in his Discharge Tube.
3. What was discovered in the Tube of Jean Perrin (Paddle Wheel Tube).
4. How was the Mass of the Electron determined?
5. How were Ions and the Proton discovered?
6. Define an Isotope and tell how Isotopes were discovered.
7. Give the Mass and Charges of a) Protons, b) Neutrons, c) Electrons.
8. How did Becquerel discover Radioactivity?
9. Tell how Rutherford found the Three Rays of Radioactivity.
10. How did Rutherford find the Size of the Atomic Nucleus?
11. Describe Three types of Accelerator Detectors.
12. Define: a) Proton, b) Neutron, c) Electron, d) Isotope, e) Mass number, f) Atomic Weight.
13. Complete this equation: ${}_{2}^{4}\mathrm{He} + {}_{13}^{27}\mathrm{Al}$ gives ${}_{14}^{30}\mathrm{Si} + ?$

13. a) What is Nuclear Fission? b) Write the Equation for the Fission of ${}_{92}^{235}\mathrm{U}$
14. Explain the Chain Reaction in the Nuclear Bomb.
15. List the Five major parts of the Nuclear Reactor.
16. Summarize the findings of the Michelson-Morley Experiment.
17. What are the Three changes when we approach the speed of light according to Einstein's Theory of Special Relativity.
18. What is the meaning of Plank's Quantum Constant?
19. Describe the Four Forces
20. What is Entanglement (Non-Locality)?