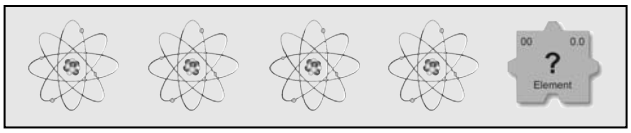
Name: _____

Date: _____ Grade: _____

SECTION QUIZ 10-1



Remember:
Score an average of 85% or higher on all three quizzes and you may be exempt from the chapter test!



Congratulations! You have completed this section!
Answer the following questions to test your understanding of the material. When you are finished, hand in your quiz to your teacher. Each answer is worth 2.5 points.

Fill in the blank or circle True or False

1. The discovery of X–rays took place during: _____.
   (a) ancient Greek times (c) the Second Scientific Revolution
   (b) exploration of the Moon by astronauts (d) Pharoahs of Egypt

2. Cathode rays are actually streams of: _____.
   (a) electrons (b) positrons (c) neutrons (d) protons

3. Because of their mysterious nature, the mathematical symbol for the unknown mysterious rays were called _____.

4. The one that stops X–rays best is: _____.
   (a) skin (b)air (c) bones (d) glass

5. The first use of X–rays was in: _____.
   (a) airport security (b) metallurgy (c) medicine (d) plant biology

6. X–rays are produced when: _____.
   (a) electromagnetic rays cross each other
   (b) moonlight shines on ice
   (c) electrons traveling at high speed are stopped by a metal target
   (d) radioactive atoms come apart

7. X–rays have a higher frequency, shorter wavelength, more energy and greater penetrating power than visible light.
   (a) True or (b) False

8. The rays from uranium that Becquerel discovered were _____ X-rays.
   (a) the same as (c) uneffected by magnetic feild
   (b) different from (d) less powerful than

9. The term radioactivity was invented by: _____.
   (a) Albert Einstein (c) John Kepler
   (b) Henri Becquerel (d) Marie Curie

10. Piezoelectricity is used in crystal microphones and in very accurate _____ watches.

11. Marie Curie named polonium after: _____.
   (a) her mother (c) her native country of Poland
   (b) Pierre's mother (d) a friend

12. The chemical symbol for polonium is _____.

13. Polonium is a radioactive element.
    (a) True or (b) False

14. Polonium can be used to: _____.
    (a) purify the air (c) conduct away accumulations of static electricity
    (b) purify water (d) to make fossil fuel

15. The one that is heavier is the: _____.
    (a) positron (b) electron (c) hydrogen atom (d) neutron

16. The nucleus of an atom has a _____ electric charge.
    (a) negative (b) large (c) neutral (d) positive

17. The one whose path is bent in a magnetic field is a(n): _____.
    (a) charged particle (c) element
    (b) neutral hydrogen atom (d) neutron

18. Atoms of the same element have the same number of: _____.
    (a) alpha particles (b) electrons (c) protons (d) nuclei

19. The number of protons in the nucleus of an atom is the atomic _____.

20. The atomic number is always a: _____.
    (a) large number (b) fraction (c) whole number (d) decimal

21. Atomic number and atomic mass: _____.
    (a) are always equal (c) are equal to the number of electrons
    (b) only apply to hydrogen (d) are different for all elements except hydrogen

22. An electron has a _____ electric charge.

23. Atomic number is the number of _____.

24. Atomic mass is the number of: _____.
    (a) electrons and neutrons (b) nuclei (c) neutrons (d) protons and neutrons

25. Chemists place elements in the periodic table in order of their atomic: _____.
    (a) mass (b) number (c) volatility (d) mass defect

26. The subatomic particle that is involved in chemical reactions is the: _____.
    (a) electron (b) neutron (c) nucleus (d) proton

27. Atoms of the same element always have the same number of _____.

28. Changing the number of neutrons or protons in the nucleus is an example of a chemical change.
    (a) True or (b) False

SECTION QUIZ 10-1

29. The atomic mass of 241 for americium shows that it has 241: _____.
    (a) electrons (c) protons and neutrons combined
    (b) neutrons (d) nuclei

30. Atoms of the same element whose nuclei have the same number of protons and different number of neutrons are: _____.
    (a) ions (b) conductors (c) isotopes (d) nonmetals

31. Isotopes of an element are not always equally abundant.
    (a) True or (b) False

32. Americium has its atomic mass in brackets, [243], because: _____.
    (a) it is radioactive and 243 is its most stable isotope
    (b) its mass must be contained
    (c) it is especially rare
    (d) it is extra heavy

33. Pitchblende contained the radioactive elements uranium, polonium and:_____.
    (a) americium (b) hydrogen (c) helium (d) radium

34. Pierre Curie calculated the energy given off by radium in: _____.
    (a) calories (b) newtons (c) curies (d) joules

35. The energy in a sample of radium: _____.
    (a) becomes exhausted after 181 hours (c) continues the same forever
    (b) is cut in half in 1,620 years (d) cannot be sampled

36. *"In the middle of difficulty lies _____."*

37. *"One never notices what has been done; one can only see what _____ to be done."*

38. *"Do you love life? Then do not squander _____, for that is the stuff life is made of."*

39. *"The best way to get something done is to _____."*

40. *"Even if you're on the right track, you'll get run over if you just _____ there."*