

**2<sup>nd</sup> Six Week Review – IPC**

**Name:** \_\_\_\_\_

- 1) What particles are found in the nucleus?
  
- 2) Where are electrons found?
  
- 3) What type of charge do electrons have?
  
- 4) What type of charge do neutrons have?
  
- 5) What type of charge do protons have?
  
- 6) Which particles' masses get added together when calculating atomic mass?
  
- 7) What does the atomic number tell you?
  
- 8) The vertical columns on the periodic table are called \_\_\_\_\_.
  
- 9) The horizontal rows on the periodic table are called \_\_\_\_\_.
  
- 10) Two elements with the same number of protons but a different number of \_\_\_\_\_ are called isotopes.

11) An atom with a charge is called an \_\_\_\_\_.

Part 2: Draw Lewis Dot Diagrams for the following elements.

12) Xe

13) C

14) O

15) Mg

Part 3: Match the following vocabulary terms

16) Elements with more than 92 protons are \_\_\_\_\_.

17) Elements that are shiny, malleable, ductile, and are good conductors of heat and electricity. \_\_\_\_\_

18) Molecules that consist of two atoms of the same element are

\_\_\_\_\_.

19) \_\_\_\_\_ means an element to be hammered or rolled into thin sheets.

20) Elements in groups 3 through 12 on the periodic table. \_\_\_\_\_

21) Materials that conduct electric current under certain conditions are

\_\_\_\_\_.

22) Different molecular structures of the same element are

\_\_\_\_\_.

23) \_\_\_\_\_ means an element can be drawn into wires.

24) Elements that are usually a gas or brittle solid at room temperature and do not conduct heat or electricity. \_\_\_\_\_

25) \_\_\_\_\_ occurs because some electrons move freely among a metal's positively charged ions, explains the properties of this category of elements.

26) Elements that share properties of metals and nonmetals are \_\_\_\_\_.

27) An element whose nucleus breaks down and emits particles and energy is called a \_\_\_\_\_.

### Word Bank

metal

malleable

ductile

metallic bonding

radioactive element

transition element

nonmetal

diatomic molecule

metalloid

allotrope

semiconductor

transuranium element

**Choose from the following to answer questions 28 – 29**

metals + nonmetals

nonmetals + nonmetals

28) Ionic bonding occurs between what two types of elements?

29) Covalent bonding occurs between what two types of elements?

**Choose from the following to answer questions 30 – 31**

they share electrons

they give and take electrons

30) In ionic bonding, what happens to the electrons?

31) In covalent bonding what happens to the electrons?

**Choose from the following to answer questions 32 – 40**

+1	polar	nonpolar	cation	anion	polyatomic
-1		monatomic		outer shell electron	

32) A positive ion is called a \_\_\_\_\_.

33) A negative ion is called a \_\_\_\_\_.

34) An ion with only one atom is called a \_\_\_\_\_ ion.

35) An ion with two or more atoms is called a \_\_\_\_\_ ion.

36) Covalent bonds where electrons are shared equally between the two atoms are considered \_\_\_\_\_.

37) Covalent bonds where electrons are shared unequally between the two atoms are considered \_\_\_\_\_.

38) A valence electron is an \_\_\_\_\_.

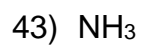
39) If an atom gives away an electron, its charge becomes \_\_\_\_\_.

40) If an atom takes an electron, its charge becomes \_\_\_\_\_.

**Draw Lewis dot structures for the following ionic substances.**



**Draw Lewis dot structures for the following covalent molecules.**



## Writing Chemical Formulas and Names

Questions 45 - 47: Use the Criss-Cross Method to write formulas for the following compounds.

	$(OH)^-$	$(SO_4)^{-2}$	$(PO_4)^{-3}$
$Zn^{+2}$			

Name the following ionic compounds.

48) NaI \_\_\_\_\_

49) LiBr \_\_\_\_\_

50)  $MgCl_2$  \_\_\_\_\_

Name the following covalent compounds

51)  $CO_2$  \_\_\_\_\_

52)  $N_2O_5$  \_\_\_\_\_

53)  $PBr_3$  \_\_\_\_\_

Use the names to write the chemical formulas for the following compounds.

54) calcium chloride \_\_\_\_\_

55) diphosphorus pentoxide \_\_\_\_\_