GAYNSTEAD HIGH SCHOOL

SIX WEEK TEST

CHEMISTRY

GRADE 9

1 hr 20 mins

READ THE FOLLOWING INSTRUCTIONS CAREFULLY

This paper consists of three sections.

Answer ALL questions in Sections A, B and C.

Name: _____

Grade: _____

DO NOT TURN THIS PAGE UNTIL YOU ARE TOLD TO DO SO.

LIVEWORKSHEETS

Section A

[1 mark each]

Q1. What is an ion?

_____

_____

Q2. What are the names for the two categories of ions? _____

Q3. What is another name for a positive ion? _____

Q4. What is another name for a negative ion? _____

Q5. Why do atoms lose or gain electrons?

_____

_____

True or false.

Q6. When an ion is negative it has more electrons _____

Q7. When an ion is positive it has more electrons _____

Q8. Metals prefer to gain electrons _____

Q9. Non-metals prefer to lose electrons _____

Q10. Atoms are neutral while ions are charged particles_____

Naming Ions (Nomenclature)

Note: Simple cations are named by saying the element and adding the word "ion."

Na^+ is called "sodium ion"

Q11. Is sodium a metal or non-metal?

_____

Q12. Did sodium lose or gain electrons?

_____

Q13. How many electrons did sodium gain or lose?

_____

LIVEWORKSHEETS

Mg^{2+} is called "magnesium ion"

Q14. Is magnesium a metal or non-metal?

_____

Q15. Did magnesium lose or gain electrons?

_____

Q16. How many electrons did magnesium gain or lose?

_____

Al^{3+} is called "aluminum ion"

Q17. Is aluminum a metal or non-metal?

_____

Q18. Did aluminum lose or gain electrons?

_____

Q19. How many electrons did aluminum gain or lose?

_____

Note: Simple anions are named by dropping the ending off the element name and adding "ide."

F^- is called "fluoride"

Q20. Is fluorine a metal or non-metal?

_____

Q21. Did fluorine lose or gain electrons?

_____

Q22. How many electrons did fluorine gain or lose?

_____

O^{2-} is called "oxide"

Q23. Is oxygen a metal or non-metal?

_____

Q24. Did oxygen lose or gain electrons?

_____

Q25. How many electrons did oxygen gain or lose?

_____

LIVEWORKSHEETS

N^{3-} is called "nitride"

Q26. Is nitrogen a metal or non-metal?

_____

Q27. Did nitrogen lose or gain electrons?

_____

Q28. How many electrons did nitrogen gain or lose?

_____

Name these binary compounds:

CaO _____

NaCl _____

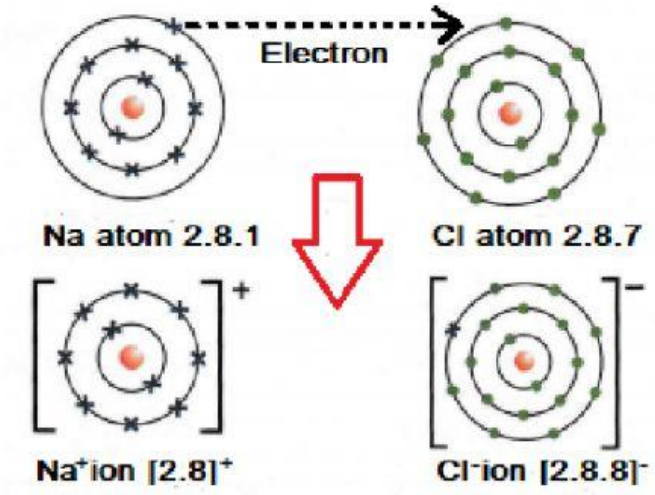
$MgBr_2$ _____

$CaCl_2$ _____

Section B

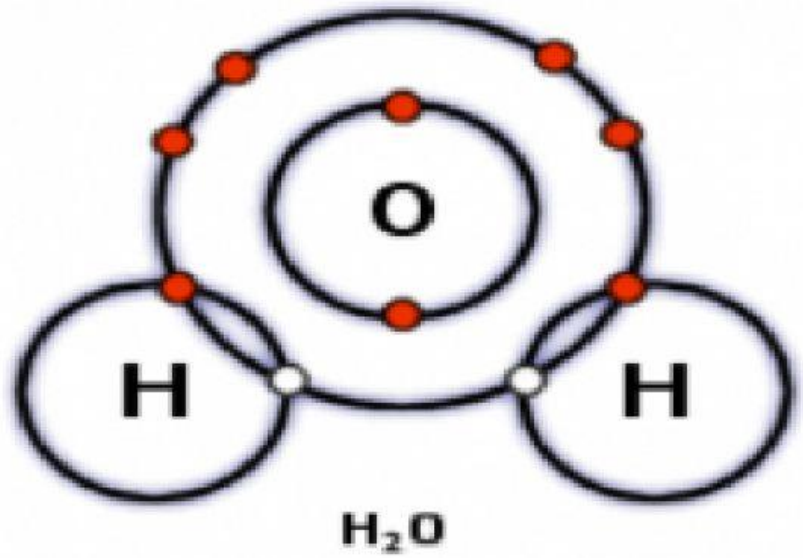
[1 mark each]

Instructions: Identify the type of bonding (metallic, ionic, covalent) that each picture represents

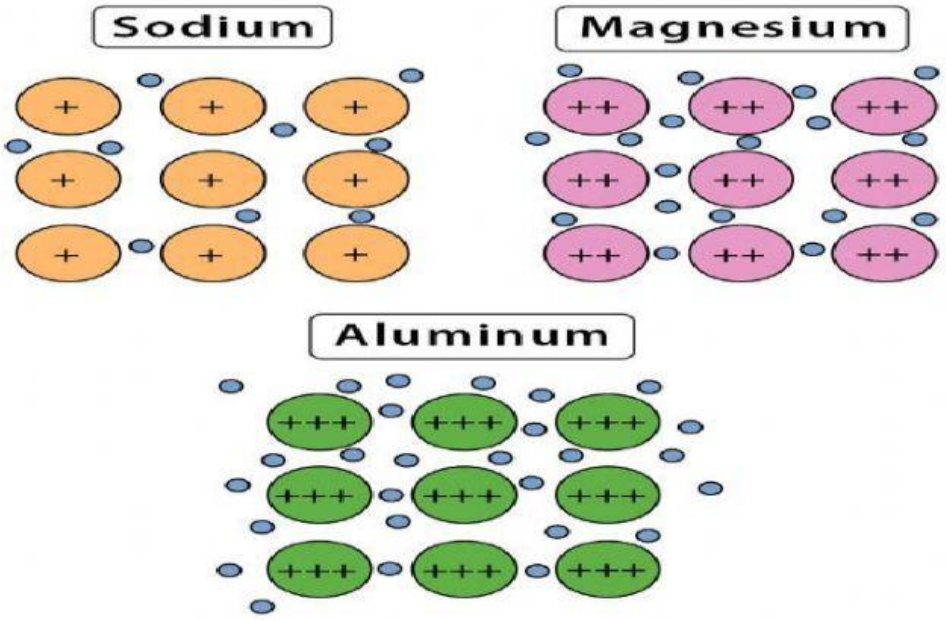


Type of bonding _____

LIVEWORKSHEETS



Type of bonding _____



Type of bonding _____

LIVEWORKSHEETS

Section C

[1 mark each]

Instruction: Match the group to the correct descriptor by placing the group number on the line provided.

Group number	Symbol for ions	Descriptor
1	Na^{+} , Li^{+} , K^{+}	The elements in this group gain two electrons _____
2	Mg^{2+}, Ca^{2+}, Ba^{2+}	The elements in this group have charges that vary. Example, Carbon can either gain or lose 4 electrons. _____
3 also called group 13	Al^{3+}	The elements in this group lose one electron _____
4 also called group 14	C^{4+}, C^{4-}, Sn^{2+}, Pb^{2+}	The elements in this group lose two electrons _____
5 also called group 15	N^{3-}, P^{3-}	The elements in this group lose three electrons _____
6 also called group 16	O^{2-}, S^{2-}	The elements in this group gain three electrons _____
7 also called group 17	F^{-} , Cl^{-} , Br^{-} , I^{-}	The atoms in this group do NOT form ions. Their charge is always zero. _____
8 also called group 18	He, Ne, Ar, Kr	The elements in this group gain one electron _____

End of test

Total: 43 marks

LIVEWORKSHEETS