Year 10 Chemistry Practice Test 2018

Name: SOLUTIONS

Total Marks: /24 **Working Time: 35 minutes**

Use the periodic table provided to answer the following questions:

1. **Fill in the table below:** **(4 marks)**

Atom/Ion	Name of atom/Ion	Number of Electrons	Number of Protons	Number of Neutrons	Electron Configuration
F	Fluorine	9	9	10	2,7 (1
N^{-3}	Nitride	10	7	7	2,8 (1
K^{+}	Potassium ion.	18	19	20	2,8,8 (1
Ca	Calcium	20	20	20	2,8,8,2 (1

2. **Using Magnesium (Mg) as an example, explain what the <u>periods and groups</u> of the periodic table represent:** **(4 marks)**

Periods = Number of electron shells (1)
= Mg in ~~group~~ period 3 = 3 shells (2,8,2) (1)

Groups = Number of electrons on valence shell (1)
= Mg has 2 electrons = Group 2 (2,8,2) (1)

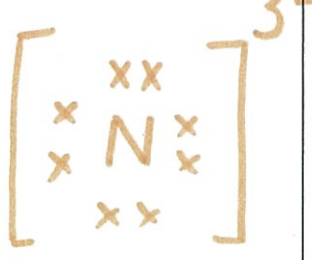
3. **Draw electron dot diagrams for the following:** **(4 marks)**

(1) (1) (1) (1)

Chlorine

O_2

Nitride



Lithium Oxide

4. Describe why covalent and ionic bonds <u>do not allow</u> electrical conduction, whereas metallic bonds do: (4 marks)

Metallic bonds have a sea of free flowing electrons which allow electricity (electrons) to flow through them - current (1) (1)

(Solid) Ionic + Covalent bonds have electrons in a fixed position (1) due to sharing/donating. And therefore do not allow current to flow through them (1)

5. Name the type of bond involved in the following compounds: (4 marks)

NH_3	Covalent (1)
Fe	Metallic (1)
BaI_2	Ionic (1)
O_2	Covalent (1)

6. Write the symbols and the charge of the following polyatomic ions in the table below: (4 marks)

Polyatomic Ion Name	Symbols (including valency)
Hydroxide	OH^- (1)
Carbonate	CO_3^{2-} (1)
Ammonium	NH_4^+ (1)
Ethanoate	CH_3COO^- (1)

End of Test