

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 periods and groups of the periodic table represent:

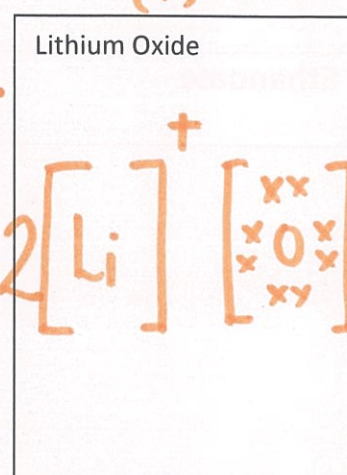
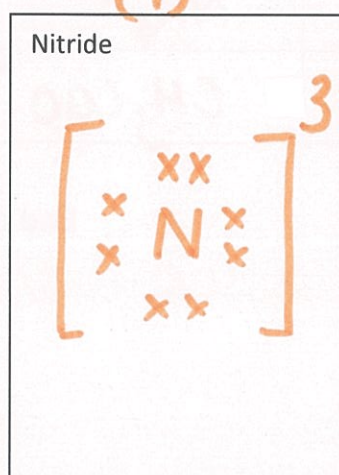
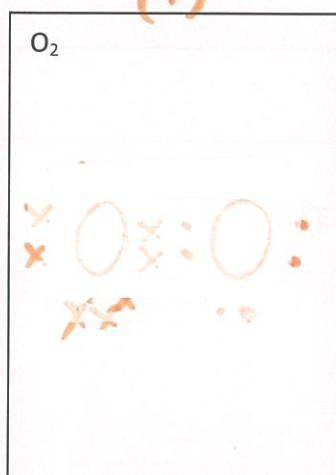
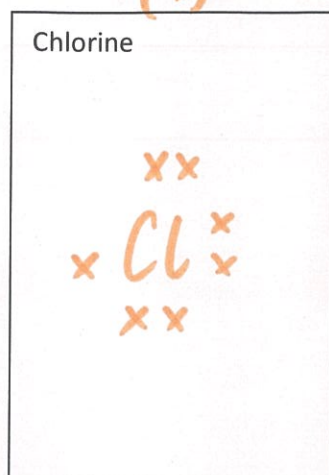
(4 marks)

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)



4. Describe why covalent and ionic bonds do not allow 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)
(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 ₃ COO ⁻	(1)

End of Test