

Chemistry Form II Review Questions:

Name: _____ Class: _____ ID No: _____

Q1: An element **X** has a proton number of **19** and relative atomic mass of **39**.

a) How many electrons, protons and neutrons are there in an atom of **X**?

Protons	Electrons	Neutrons

b) How many electrons will there be in the outer energy level of an atom

X.....

c) Write down the symbol for the ion **X**.....

d) Which group of the periodic table would **X** be in?.....

Q2: Use the information given in the table below to answer the questions below concerning the elements **Q**, **R**, **S**, **T** and **X**.

Element	Proton number	Nucleon number	Electronic configuration
Q	3	7	2:1
R	20	40	2:8:8:2
S	18	40	2:8:8
T	8	18	2:6
X	19	39	2:8:8:1

a) Which elements have 22 neutrons in each atom?.....

b) Which element is a noble gas?.....

c) Which two elements form ions with the same electronic configuration as Argon?.....

d) Which two elements are in the same group of the periodic table and which group is this?

.....

e) Which is the most reactive metal element shown the table?.....

f) Which of the above elements is Calcium?.....

Q3: Complete the table below for the isotopes of some common elements.

Isotope	Name	Proton number	Mass Number	Protons	Electrons	Neutrons
¹⁶ O						
¹⁷ O						
¹² C						
¹³ C						
²⁵ Mg						
²⁶ Mg						

Q4: The table below shows the structures of several particles.

Particle	Electrons	Protons	Neutrons
A	12	12	12
B	12	12	14
C	10	12	12
D	10	8	8
E	9	9	10

a) Which three elements are neutral atoms?.....

- b) Which particle is a negative ion?.....
- c) Which particle is a positive ion?.....
- d) Which two particles are isotopes?.....
- e) Use a periodic table to identify A and E.....

Q5: Atoms of elements **X, Y and Z** have **16, 17 and 19** electrons respectively. Atom of Argon has 18 electrons.

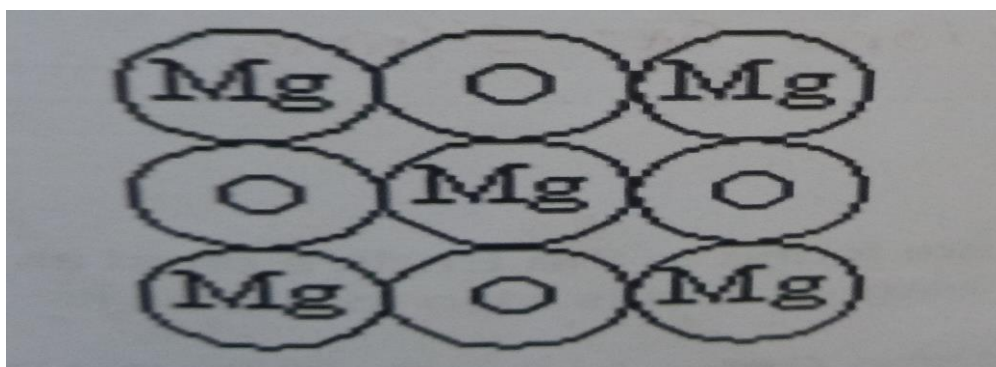
a) Determine the formula of the compound formed by the combination of the atoms of the elements:

- X and Y**.....
- Y and Z**
- With **X** itself.....
- Using a periodic table identify substances **X, Y and Z**.

b) Name the type of chemical bond formed between **X** and **Y**.

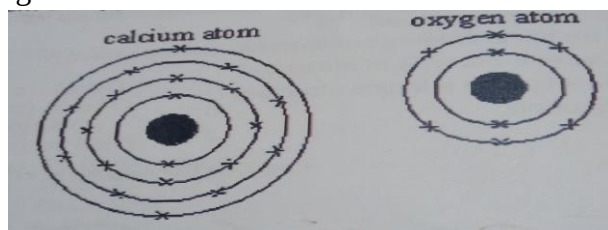
c) Give two properties in the compound formed when **X** and **Y** reacts.

Q6: Magnesium oxide is a compound, made up of magnesium ions and oxide ions.



- a) What is the charge of each Magnesium ion?.....
- b) Explain how the Magnesium ions get this charge.

Q7: The diagrams below show the electronic structure of an atom of Calcium and an atom of Oxygen.



a) Describe fully what happens to its electrons when:

A. A calcium atom forms a calcium ion .State the charge on the calcium ion formed.....

B. An oxygen atom forms an oxygen ion. State the charge on the oxygen ion formed.....

b) Calcium oxide is an ionic compound. Why do ionic compounds have high melting points?

Q8: Calcium and Magnesium are elements. They are found in the Earth`s crust as compounds, often carbonates and sulphates. Magnesium is also found as its chloride.

a) Calcium and Magnesium are in the same group in the periodic table. State which group is this?

b) Use the periodic table to help you to answer these questions:

a. Write the chemical formula of magnesium chloride.....

b. Name the type of bonding in magnesium chloride.....

The End