GERSHIBON CHRISTIAN HIGH SCHOOL
CHEMISTRY MID TERM 3 2019 S.2
ANSWER ALL QUESTIONS IN SPACES PROVIDED.

1. The atomic numbers of elements **Q**, **R** and **T** are 2, 6 and 17 respectively;

(a) State;

(i) The group in the periodic table to which **Q** belongs. *(½ mark)*

……

(ii) The period in the periodic table to which **T** belongs. *(½ mark)*

……

(b) **Q** is generally unreactive. Give a reason. *(01 mark)*

……

(c) State one general property of elements in the group to which **T** belongsin the periodic table.
(½ mark)

……

(d) When **R** combines with **T**, the compound formed is a liquid at room temperature and is insoluble in water;

(i) Write the formula of the compound. *(01 mark)*

……

……

(ii) Suggest one reason why the compound is not soluble in water. *(01 mark)*

……

……

2. (a) When water was added to solid **X**, a colourless, ordourless gas was evolved that relights a glowing splint.

(i) Name solid **X.** *(01 mark)*

……

(ii) Write an equation for the reaction that took place. *(1½ marks)*

……

……

(b) State what would be observed if litmus paper was added to the resultant solution in (a) above. *(01 mark)*

……

(c) Name any other substance that evolves a colourless gas in (a) above. *(01 mark)*

……

3. Define the following terms. **(5 marks)**

(a) An atom……

……..

(b) Oxidation……

……

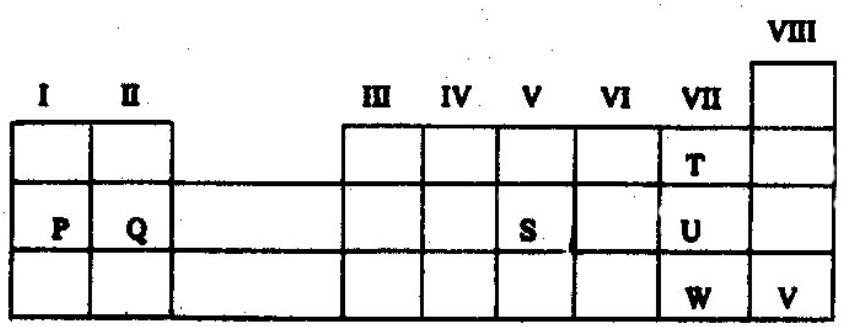
(c) Isotopes…….

……..

(d)An alloy……
…….

(c) Mixture
……
……..

4. Part of the Periodic Table is shown below. The letters are not the usual symbols for elements.



Which is the least reactive element? **(1 mark)**

……

(b) Which one of the elements, T, U and W reacts most vigorously with Q? **(1mark)**

……

(c) Write the formula of the compound formed between Q and S. **(1 mark)**

……

(d) The compound formed between P and W was dissolved in water.
State whether resultant solution was acidic, basic or neutral. **(1 mark)**

……

Which two elements represented in the table can react as reducing agents?**(1 mark)**

……

5.Using the outermost energy level only, show how the following elements react to formcompounds: **(5 marks)**

(a) Nitrogen with hydrogen to form ammonia

(b) Hydrogen with oxygen to form water

(c) Magnesium with chlorine to form magnesium chloride

6. Complete the following equations: **(10 marks)**

(a) $H_2O_2(aq) \xrightarrow{MnO_2}$

(b) Zn(s) + HCl (aq) $\longrightarrow$

(c) Fe (s) + $H_2O(g) \longrightarrow$

(d) Mg(s) + $H_2O(g) \longrightarrow$

(e) Na(s) + $H_2O(l) \longrightarrow$

7.(a) Define the term oxide **(1 marks)**

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.....

(b) State whether the following oxides are acidic, basic, neutral or amphoteric.

(a) ZnO.....

(b) SO_2…….

(c) K_2O.....

(d) N_2O.....

END