

**FORM TWO CHEMISTRY  
HOLIDAY ASSIGNMENT  
APRIL, 2024**

1. Define the following terms:

- a) **Isotope**
- b) **Relative atomic mass**
- c) **Ionization energy**
- d) **Electron affinity**
- e) **Double decomposition**
- f) **Salt of crystallization**
- g) **Deliquescent salts**
- h) **Hygroscopic salts**
- i) **Spectator ions**
- j) **Electrolyte**
- k) **Binary electrolyte**

2. The table below shows three isotopes of element neon. Study it and answer the questions that follow;

Mass number of Isotope	Percentage abundance (%)
20	90.9
21	0.3
22	8.8

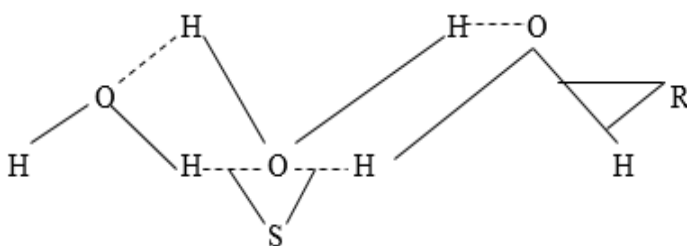
a) What are isotopes. (1mk)

b) Calculate the relative atomic mass of an atom of neon. (2mks)

0.28g of aluminium reacted completely with oxygen gas. Calculate the volume of oxygen used. (molar gas volume is  $24000\text{cm}^3$  Al = 27). (3mks)

3. Describe how pure sample of zinc carbonate can be prepared in the laboratory starting with zinc metal.

4. The diagram below shows a structure of water molecules.



Name the bonds labeled

R - (1/2mk)

S - (1/2mk)

b) Using dot (.) and cross (x) diagram show bonding in;

i) Potassium chloride (K = 19, Cl = 17) 1mk

ii) Carbon tetrachloride. (C = 6, Cl = 17) 1m

5. Draw a well labeled diagram to show how oxygen gas can be obtained from thermal decomposition of lead (ii) nitrate. (3mk)

6. The table below shows three isotopes of element neon. Study it and answer the questions that follow;

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a) What are isotopes.

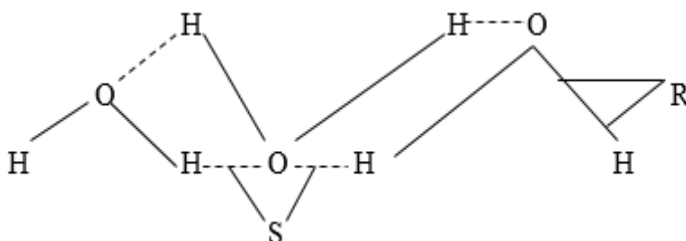
b) Calculate the relative atomic mass of an atom of neon.

(2mks)

7. Describe how pure sample of zinc carbonate can be prepared in the laboratory starting with zinc metal.

(3mks) a) The diagram below shows a

structure of water molecules.



Name the bonds labeled

R -

(½mk).

S -

(½mk)

b) Using dot (.) and cross (x) diagram show bonding in;

i) Potassium chloride (K = 19, Cl = 17)

1mk

8. The table below shows three isotopes of element neon. Study it and answer the questions that follow;

Mass number of Isotope	Percentage abundance (%)
20	90.9
21	0.3
22	8.8

a) What are isotopes.

(1mk)

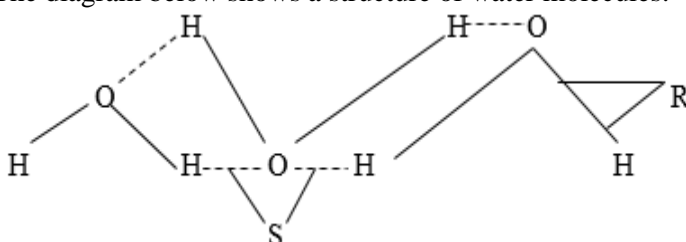
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b) Calculate the relative atomic mass of an atom of neon.

(2mks)

9. Describe how pure sample of zinc carbonate can be prepared in the laboratory starting with zinc metal.

10. a) The diagram below shows a structure of water molecules.



Name the bonds labeled

R -

(½mk)

S -

(½mk)