

40 MARKS

Qs 1

- a) Name the following(5)
- i) Temperature of oxy hydrogen flame
 - ii) Solubility of hydrogen in water
 - iii) A covalent compound having 2 double covalent bonds
 - iv) A charged particle
 - v) The inert gas in period 3

b) Draw the electron dot diagram for the following(5)

- i) methane
- ii) Magnesium chloride

Qs 2

a) With respect to the periodic table, answer the questions that follow (5)

- i) Name elements of period 3
- ii) What are actinides
- iii) Why does the size of atoms increase as you go down a group
- iv) Why are elements of zero group non reactive
- v) What are transition elements?

b) Give equations for the following reactions(3)

- i) hydrogen and nitrogen
- ii) hydrogen and oxygen
- iii) hydrogen and chlorine

c) Find the volume of a gas at 200C, if it occupies 400 ml at 27C. Pressure remaining constant(2)

Qs 3a With respect to the large scale production of hydrogen(5)

- i) Give equations necessary for the preparation of hydrogen
- ii) Give equations to show how you would remove impurities present in the product formed
- iii) Name the process
- b) Give reasons(5)
- i) Hydrogen is used in meteorological balloons
- ii) Gases expand on heating
- iii) Electrovalent compounds can conduct electricity
- iv) Covalent compounds have low melting point and boiling point
- v) Hydrogen is used in the metallurgy industry

Qs 4

A) X and Y are atoms of elements(7)

- i) Identify the period and group they belong to
- ii) Draw the electron dot diagram of the compound they form
- iii) Give its formula
- iv) Is the compound an ionic compound or covalent? Why?
- v) Predict 2 properties of the compound with respect to density and state
- B) A gas occupies 300 ml at -23C and 380mm of pressure, Find its volume at S.T.P.(3)