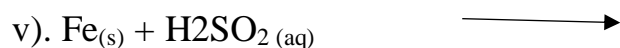
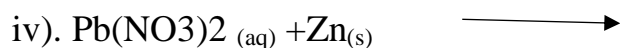
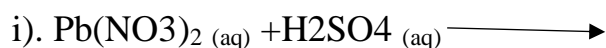


S.2 ZOOM EXAM
CHEMISTRY
1 HOUR:20 MINUTES

INSTRUCTIONS

Attempt any 5 questions by writing them on the answer sheet, forward your work in pdf form by in boxing it on “0750824957”

1(a). Complete and balance the following chemical equations:



2. (a). Define the following terms:

(i). Valency

(ii). Atom

(iii). Radicle

(b). Using symbols, valency of radical and elements, write the chemical formulae for the following compounds:

(i). Iron (II) sulphate

(ii). iron (III) sulphate

(iii). Calcium nitrate

(iv). Aluminium sulphate

(v). Ammonium phosphate

(vi). Aluminium oxide

3 (a). What is atmosphere?

(b). Name the component of air removed when:

(i). Iron rusts

(ii). Substances burn in air

(iii). Air is passed over heated copper turning

(iv). Air is passed through calcium hydroxide solution (Limewater).

(c). Calculate the percentage of oxygen in a sample of air from the following experimental results:

Initial volume of air=40.0cm³

Volume of air remaining after reacting with metal=31.60cm³

4. Iron reacts with excess steam to form solid **K** and gas **L**.

(a).Name:

(i) Solid **K**

(ii) Gas **L**

(b). State what was observed during the reaction

(c). State how gas **L** could be tested

(d).A gaseous product was dried and passed over heated lead oxide in a combustion tube.

(i). State what was observed.

(ii). Write an equation for the reaction.

5. An atom of metal **G** is represented as ${}_{13}^{27}\text{G}$

(a).(i).Write the electronic structure of **G**.

(ii). In which period of the periodic table does element **G** belong? Give a reason for your answer.

(b). Write the formula of the;

(i). Sulphate of **G**

(ii).Most common ion formed by **G**

6. (a) What is basicity of an acid?

(b) Complete and balance the following equations

(i) $\text{KOH}_{(\text{aq})} + \text{H}_2\text{SO}_{4(\text{aq})}$

(ii) $\text{CaCl}_{2(\text{aq})} + \text{H}_2\text{SO}_{4(\text{aq})}$

(c) Complete the following equations to show the effect of heat on the salts

