*N*ame……

Stream……Signature……

545/2
CHEMISTRY
Paper 2
(Practical)
2 hours

WUNNA EDUCATIONAL SERVICES

LEARNERS' ASSESSMENT BOARD (WESLAB)

Uganda certificate of Lower secondary education

M.O.T 1 ASSESSMENT ONE
S.3 CHEMISTRY PAPER 2
(Practical)
2 hours

INSTRUCTIONS TO CANDIDATES:

- ✓ *This paper consists of one compulsory item.*
- ✓ *Answers to this item are to be written in the spaces provided in this booklet. Use blue or black ink.*
- ✓ *Any work done in pencil except drawings and graph will not be scored.*
- ✓ *All working must be clearly shown. Graph paper* ***will pe provided.***
- ✓ *Mathematical tables and silent non-programmable scientific calculators may be used.*
- ✓ *Candidates are advised to carefully read the item, make sure they have all the apparatus and chemicals they may need and then plan appropriately before* starting.

Item

During her practical investigation, Katumba a student of S.3 discovered that during the displacement reaction between copper (II) sulphate solution and iron fillings produce heat because the reaction beaker became warmer. However, he was not sure of the amount of heat produced by the reaction.

The reaction is represented by the equation;

$$Fe_{(s)} + CuSO_{4(aq)} \longrightarrow FeSO_{4(aq)} + Cu_{(s)} + heat\ energy$$

You are provided with;

BA_1 which is copper (II) sulphate solution

Metal X which is iron fillings

Task;

As a chemistry student;

(a) Design an experiment to determine the amount of heat produced the above reaction. (Your design should include aim, hypothesis, variables, apparatus and materials, procedure, risks and mitigations).

(b) Carry out your experiment and record your findings

(c) Analyse your results in (b) above

(d) What do you conclude from the above experiment?