# CENTRAL EAST EDUCATION DIVISION

**2023 MALAWI SCHOOL CERTIFICATE OF EDUCATION MOCK EXAMINATION**

# CHEMISTRY

**Thursday, 16th March** **Subject Number: M036/II**

**Time allowed: 2 hour sessions**

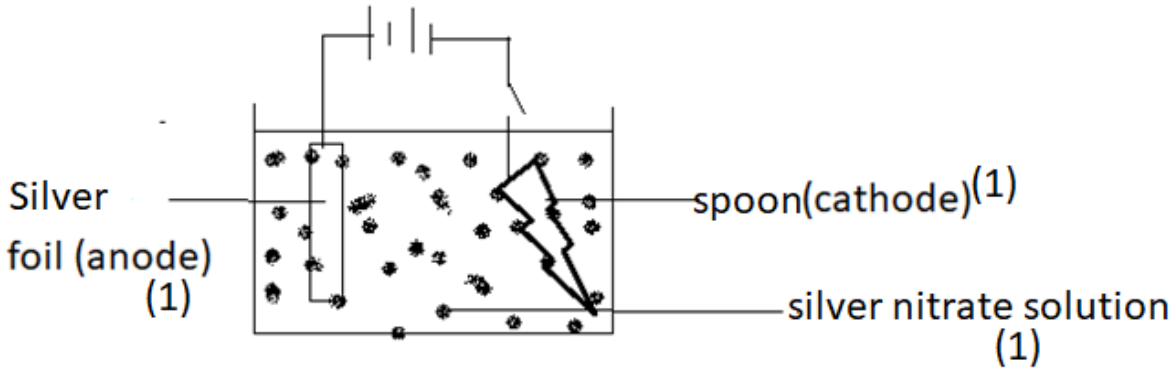
**8:00 a.m. onwards**

## PAPER II

**(40 marks)**

***MARKING KEY CHEM PAPER II***

***Q1***




a. ***Set up the apparatus as in the diagram above.***
b. ***Close the switch. (1)***
c. ***Allow the current to flow for some time eg five minutes. (1)***
d. ***At the anode: Silver dissolves in the solution and gets oxidized(1) as per half equation***

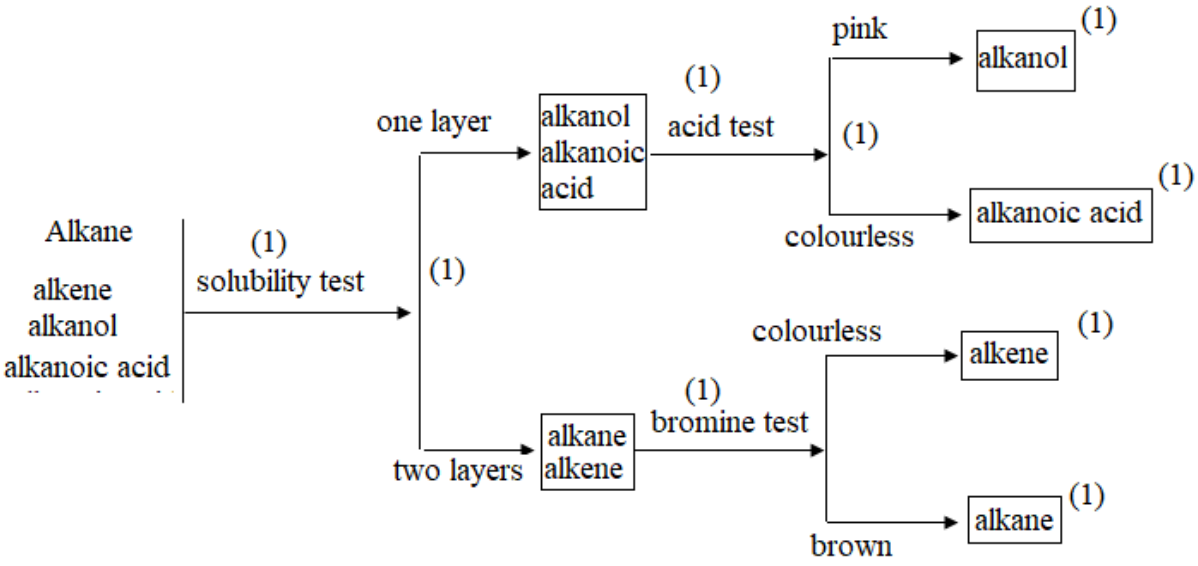
   $Ag(s) \rightarrow Ag^{+}_{(aq)} + e^{-}$ ***(1)***

e. ***At the cathode*** $Ag^{+}$ ***ions are deposited and gain electrons (1)***

   $Ag^{+}_{(aq)} + e^{-} \rightarrow Ag(s)$ ***(1)***

f. ***Silver solid coat the spoon and the spoon gets electroplated. (1)***

Q2




***Q3 d.*** ***Initial temperature*** ***21°C*** ***or any number***

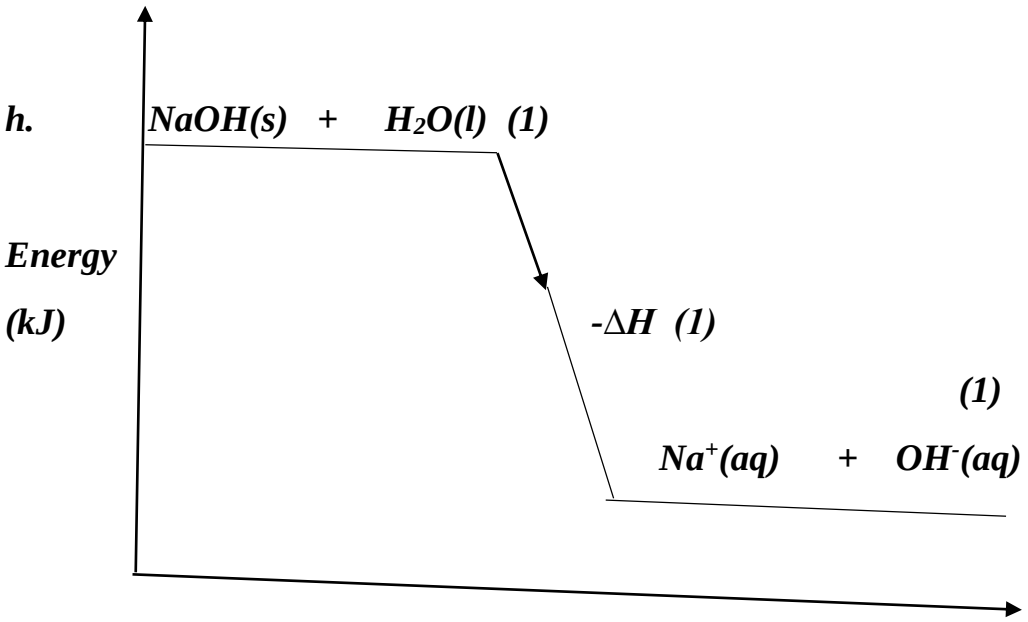
***Final temperature*** ***37°C*** ***or number that shows an increase in temperature***

***e. Change in temperature = Final - Initial = positive change in temperature.*** $+\Delta T$

***f. Exothermic reaction***

***g. The reaction releases heat energy to the surrounding.***

***h.***




| *Substance being tested* | *Colour obtained on adding universal indicator* | *pH value* |
|---|---|---|
| *X* | *red* | *1-2* |
| *Y* | *purple* | *13-14* |
| *Z* | *Light orange* | *5* |

***(6 marks)***

***a. Classify the tested acids and bases as weak or strong.***

***X. strong acid.***

***Y strong base***

***Z. weak acid*** ***(3 marks)***

***b. These should be kept constant.***

***Concetration/ volume of both subtances and universal indicator (1 mark)***