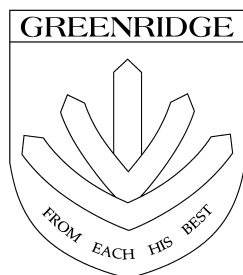


Name : _____ ()

Class : 4E1



GreenRidge Secondary School

Mid-Year Examination 2002

CHEMISTRY 5068/3

PAPER 3 Practical Test
(C. Nov 96)

Time : 50 minutes

INSTRUCTIONS TO CANDIDATES

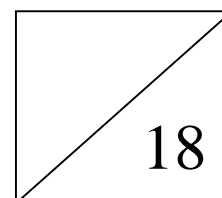
Write your name and index number in the spaces at the top of this page.

Write your answers in the spaces provided on the question paper.

You should show the essential steps in any calculation and record all experimental results in the spaces provided on the question paper.

INFORMATION FOR CANDIDATES

The number of marks is given in brackets [] at the end of each question or part question.



Materials

Q : 0.0940 mol dm⁻³ aqueous sodium hydroxide

P : an aqueous solution of an impure sample of a dibasic acid H₂X

Use the following procedure to determine the percentage purity of the sample of H₂X used to make **P**.

Procedure

Place the acid **P** in the burette.

Pipette 25.0 cm³ (or 20.0 cm³) of **Q** into a flask and titrate with **P** using the indicator provided.

Record your results in the table, repeating the titration as many times as you consider necessary to achieve consistent results.

Results

Burette readings

Titration number	1	2			
Final Reading / cm ³					
Initial Reading / cm ³					
Volume of P used / cm ³					
Best titration results (✓)					

Summary

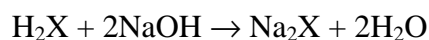
_____ cm³ of **Q** required _____ cm³ of **P**.

State which titration results were used in calculating this volume of **P**.

[12]

In all the calculations which follow, you are reminded that essential steps must be shown. Calculate the following from the titration results.

1. The equation for the reaction is shown below.



Calculate the concentration, in mol dm^{-3} , of H_2X in **P**. [2]

2. Given that the relative molecular mass (M_r) of H_2X is 90, use your answer to 1 to calculate the concentration, in g dm^{-3} , of H_2X in **P**. [2]

3. **P** was prepared by dissolving 5.00 g of an impure sample of H_2X in water to make 1 dm^3 of solution. Use your answer to 2 to calculate the percentage purity of the acid H_2X which was used to make **P**. [2]