CHEMISTRY PAPER TWO

1. The description of the two reagents and chemicals specified below does not necessarily correspond with the description in the question paper.

Candidates must NOT be informed of the differences.

1. Candidates are not allowed to use reference books.(text books, booklets on qualitative analysis etc) during examination.
2. In addition to the fittings and substances ordinarily available in a chemistry laboratory, each candidate will require;

* 100cm3/m1 measuring cylinder.
* 10cm3/m1 measuring cylinder.
* A stop clock/watch
* A glass beaker or conical flask.
* A thermometer
* 250cm3m1 of BA1
* 30cm3/m1 of BA2.

NB: BA1 is a 0.05M sodium sulphate solution.

BA2 is 0.1M Hydrochloric acid solution.

ITEM 1

In a photographic industry, sodium thiosulphate is used to improve the quality of photographic printing paper. One of the workers in a printing studio has advised that temperature in the printing machine (printer) must be adjusted/ monitored as it affects the rate of reaction of the sodium thiosulphate on the printing paper so as not to delay their customers. Other workers seemed not to understand his argument and they wanted to investigate the issue at hand.

Sodium thiosulphate reacts with hydrochloric acid, the same way it does with photographic printing paper according to the equation:



You are provided with the following:

* Dilute hydrochloric acid solution.
* Sodium thiosulphate solution.
* Some laboratory apparatus.

TASK: As a chemistry learner,

1. Design an experiment that can be used to help the workers understand their colleague’s aurguement.
2. Perform the experiment and record your results.
3. Analyse and interprete your results
4. What conclusion can you obtain from part C.

END