allowed into the air as an explosion may result' Gas A is nitrogen. Nitrogen is fairly inert and therefore an explosion cannot occur. Other candidates wrote 'ensure the apparatus is in a slanting position so that the water does not run back'. The apparatus is already in that position! The responses given by candidates are a manifestation of poor tuition.

Candidates should be allowed to prepare the various gases and test their properties themselves. Theoretical teaching should be avoided.

Candidates should be cautioned on the precautions to take in order to protect themselves during experiments and in order to realize correct results. It is not enough to just state the precautions. Reasons for the precautions should be given whenever experiments are carried out.

Expected Responses

a) Gas A is nitrogas gas

b) The delivery tube should be removed from the water. This prevents sucking back.

Question 12

Starting with aluminium sulphate, describe how a solid sample of aluminium hydroxide could be prepared. (3 marks)

Candidates were required to describe how solid aluminium hydroxide could be prepared starting with aqueous aluminium sulphate.

Weaknesses

Some candidates did not have any idea on what to do. They left it blank. Other candidates had the following wrong responses.

- React aqueous aluminium sulphate with aqueous sodium carbonate. The candidates expected to obtain a precipitate. The carbonate of aluminium does not exist. Hence this method could not work.
- Add water to aluminium sulphate (aqueous). The substance was already dissolved in water and thus there was no need to add more water.
- React with hydrochloric acid. No precipitate would be formed. This shows serious lack of knowledge and lack of concentration. Candidates should read each question carefully, understand it and give a well thought out response. Even if the aluminium hydroxide was to be formed through some miracle it ***cannot*** exist in an acidic medium.
- Addition of aqueous sodium hydroxide. This reaction forms aluminium hydroxide (solid) first. Aluminium hydroxide is amhorteric and thus dissolves in the NaOH to