

form a clear solution. This method is not suitable. It should be emphasized to candidates that questions on descriptions demand special attention. All steps must be known and **must** be arranged in a logical order. If the steps are not so arranged, the procedure breaks down. If the first step is wrong, then everything else is wrong and no marks can be awarded.

Candidates should therefore take time to plan and present responses in a logical manner.

### Expected Responses

Add aqueous ammonia to aqueous aluminium sulphate to form solid  $\text{Al}(\text{OH})_3$ . Filter the mixture. Dry the residue in a desiccator or in the sun. [Note the product cannot be dried in an oven at high temperatures because it will decompose and change into aluminium oxide].

### Question 20

State two factors which determine the stability of an isotope. (2 marks)

The question required the candidates to state the factors that determine whether a named isotope is going to be stable or not.

### Weaknesses

This was the poorest performed question in the entire paper with a score of less than 5% of the sample surveyed. The greatest number of candidates left it blank. Those who attempted gave irrelevant responses such as:-

- The number of energy levels
- The number of protons
- The mass number
- The number of electrons

One candidate stated that the climatic conditions also determines whether an isotope is stable or not. The responses given by the candidates show that the topic is either not taught at all or it is hurriedly covered being the last chapter in the form four syllabus.

Candidates and teachers are reminded that all topics in the syllabus can be examined and therefore all must be given adequate coverage. In topics where practicals cannot be easily given, models, charts etc. should be used as teaching aids for the principles and concepts in chemistry to be well understood.

### Expected Responses

- Neutron – proton ration. The isotope is most suitable if ratio = 1
- Amount of energy released when an isotope is formed.