



Rewarding Learning

**ADVANCED SUBSIDIARY (AS)
General Certificate of Education
2017**

Chemistry
Assessment Unit AS 3

assessing

Module 3: Practical Examination
Practical Booklet A

[AC133]

MONDAY 8 MAY, MORNING



AC133

**APPARATUS
AND
MATERIALS
LIST**

Advice for centres

- All chemicals used should be at least laboratory reagent specification and labelled with appropriate safety symbols, e.g. irritant.
- For centres running multiple sessions – candidates for the later session should be supplied with clean, dry glassware. If it is not feasible then glassware from the first session should be thoroughly washed, rinsed with deionised water and allowed to drain.
- **Ensure all chemicals are in date otherwise expected observations may not be seen.**

It is the responsibility of the centre to be cognisant of all health and safety issues and to carry out a thorough risk assessment. Up to date information can be obtained at www.cleapss.org.uk.

Practical Examination

Each candidate must be supplied with safety goggles or glasses.

Question No. 1

Each candidate must be supplied with:

- one 50 cm³ burette of at least class B quality;
- a funnel for filling the burette;
- a retort stand and clamp;
- one beaker for waste solution;
- one 25 cm³ pipette of at least class B quality;
- a safety pipette filler;
- three conical flasks of 250 cm³ capacity;
- a white tile or white paper;
- a wash bottle containing deionised water;
- phenolphthalein indicator with dropper;
- 150 cm³ of 0.1 mol dm⁻³ hydrochloric acid labelled as **0.1 mol dm⁻³ hydrochloric acid**;
- 150 cm³ of 0.1 mol dm⁻³ sodium hydroxide labelled as **alkali**.

Question 2

(a) Each candidate must be supplied with:

1.5 g of sodium chloride labelled **A**

Test tube rack

Bungs to fit test tube

A minimum of 4 test tubes per candidate

Deionised water

A small bottle of 0.1 mol dm^{-3} silver nitrate solution labelled as **silver nitrate solution**

Several plastic droppers

A small bottle of 2.0 mol dm^{-3} ammonia solution labelled as **dilute ammonia** (approximately 10 cm^3)

Clean nichrome wire

Bunsen burner

Spatula

(b) 10 cm^3 of copper(II) sulfate solution – light blue colour – labelled **B** (one small spatula measure per 50 cm^3)

A small bottle of 2.0 mol dm^{-3} ammonia solution labelled as **dilute ammonia** (approximately 10 cm^3)
[Same bottle as in (a)]

(c) Ethanol – labelled **C** (5 cm^3)

10 cm^3 of 0.1 mol dm^{-3} potassium dichromate solution labelled as **potassium dichromate solution**

10 cm^3 of 2.0 mol dm^{-3} sulfuric acid labelled as **dilute sulfuric acid**

250 cm^3 Beaker for hot water bath

Kettle for hot water bath