

Principal Assessor Report 2003

Assessment Panel:

Chemistry

Qualification area

**Subject(s) and Level(s)
Included in this report**

Intermediate 2

Statistical information: update

Number of entries in 2002	
Pre appeal	1433
Post appeal	1433

Number of entries in 2003	
Pre appeal	1613

General comments re entry numbers

There was an 11% increase in the numbers of candidates being presented for Intermediate 2 Chemistry. Whereas previously the candidates had been presented from S5/6, it was noticeable this year that some centres presented S4 candidates.

Grade boundaries at C, B and A for each subject area included in the report

Maximum marks = 80

Grade boundaries expressed as a percentage mark in brackets

Pass mark stage				
	Mark (Lowest)			
Year	Upper A	A	B	C
2002	66 (82.5%)	53 (66.3%)	45 (56.3%)	37 (46%)
2003	68 (85%)	56 (70%)	48 (60%)	40 (50%)

General commentary on passmarks and grade boundaries

- While SQA aims to set examinations and create mark schemes which will allow a competent candidate to score a minimum 50% of the available marks (notional passmark) and a very well-prepared, very competent candidate to score at least 70%, it is almost impossible to get the standard absolutely on target every year, in every subject and level
- Each year we therefore hold a passmark meeting for each subject at each level where we bring together all the information available (statistical and judgmental). The Principal Assessor and SQA Qualifications Manager meet with the relevant SQA Business Manager and Statistician to discuss the evidence and make decisions. The meetings are chaired by members of the senior management team at SQA
- We adjust the passmark downwards if there is evidence that we have set a slightly more demanding exam than usual, allowing the pass rate to be unaffected by this circumstance
- We adjust the passmark upwards if there is evidence that we have set a slightly less demanding exam than usual, allowing the pass rate to be unaffected by this circumstance
- Where the standard appears to be very similar to previous years, we maintain similar grade boundaries
- An exam paper at a particular level in a subject in one year tends to have a marginally different set of grade boundaries from exam papers in that subject at that level in other years. This is because the particular questions are different. This is also the case for exams set in centres. And just because SQA has altered a boundary in a particular year in say Higher Chemistry does not mean that centres should necessarily alter boundaries in their prelim exam in Higher Chemistry. The two are not that closely related as they do not contain identical questions
- Our main aim is to be fair to candidates across all subjects and all levels and maintain standards across the years, even as syllabuses evolve and change

Comments on grade boundaries for each subject area

Analysis of candidate performance in the 2002 Chemistry Intermediate 2 had indicated that:

- Chemistry at Intermediate 2 remained difficult in comparison to other courses at this level
- Grade boundaries in 2002 were lower than a priori levels due to some questions not performing as planned.

Analysis indicates that the 2003 question paper was of the appropriate standard. Grade boundaries have therefore been set at the a priori levels.

Comments on candidate performance

General comments

This year saw increased numbers of candidates from S4 being presented for the exam. These candidates appeared to perform better than the other candidates.

Areas of external assessment in which candidates performed well

Candidates performed well in problem solving questions particularly:

- Q5 interpreting the bar chart
- Q 10b drawing a graph
- Q 11b and 14a suggesting structural formulae
- Q15a suggesting a name for an ether.

Candidates displayed good knowledge of functional groups and the properties of weak acids.

Areas of external assessment in which candidates had difficulty

Candidates had difficulty combining the two ion-electron half equations to form a redox equation.

Many candidates failed to balance and cancel the electrons produced and used in the half reactions.

Candidates continue to have difficulty with condensation reactions and condensation polymerisation.

Many candidates failed to identify in Q6 that the molecules were suitable as monomers because they contained two functional groups.

Performance in the volumetric calculation (Q8c) and the calculation from an equation (Q9d) was mixed with candidates from certain centres performing well whilst candidates from other centres performed poorly.

Recommendations

Feedback to centres

Candidates clearly benefit when trained to set out calculations in a systematic way. Centres should therefore attempt to ensure candidates do this.