

Report on Chemistry Olympiad Round I Paper 2003

In keeping with the comments sent in by a number of teachers, the committee felt that this year's paper was both challenging but fair, and the best Round I paper in recent years. Despite the fact that some topics will not have been covered in class, several students scored near to 100%, whilst twenty students achieved 80% or better. There were many other very good performances below this exceptional level, but some students struggled to make double figures.

Question 1 was very well answered by many students although some gave the answer to part (d) in kJ mol^{-1} .

Question 2 produced many correct answers to part (a) but cis-trans isomerism in inorganic species is generally not well understood.

Question 3 was well attempted by many students, even though 'Green Chemistry' is probably an unfamiliar subject to most students at this level.

Question 4 was a mixture of GCSE and A level reactions and it was both surprising and worrying that so many students could not write correct/balanced equations for parts (a), (b) and (c). We accept the difficulty posed by some redox reactions, and the fact that redox titrimetry may well be covered towards the end of courses at A level. This would explain the poor performances by many students with parts (e), (f), and (g). It is unfortunate that some students were unaware of the symbol for antimony in question 5. At the same time, there were many excellent answers to what was in fact a standard question, but without the masses in grammes.

We accept that question 6 was more challenging, but some bond angles given were rather unrealistic. Whilst parts (a) and (b) were accessible, there were few correct answers to part (e).

Question 7 was remarkably well attempted despite looking very complicated, but the reactions are almost entirely covered at 'A' level and a large number of students scored maximum marks. We suspect that many students enjoyed the challenge presented by this question.

Although the final question was challenging, it posed few difficulties for some students and there were a good number of quite original solutions to part (e), which was very pleasing.

Overall, we were encouraged by the number and quality of the entries this year, and we hope that an increasing number of schools and colleges will give their students the opportunity to sit the paper in 2004.

Phil Copley

Chairman of the UK Chemistry Olympiad Selection Committee