



Examiners' Report Principal Examiner Feedback

October 2020

Pearson Edexcel Advanced Subsidiary GCE
In Chemistry (8CH0)
Paper 2: Core Organic and Physical Chemistry

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Introduction

Despite the relatively small number of candidates there were still some very well prepared students who were able to achieve excellent results. The paper was similar in style to the previous papers allowing learners to demonstrate their knowledge and understanding.

Question 1

In this question the earlier, more familiar parts of the question were answered well with knowledge demonstrated of organic compounds containing chlorine and fluorine. High marks were particularly scored on the empirical formula calculation. As the question developed the more contextual idea of the reaction between fluorine and difluoromethane which required application of more familiar knowledge was less understood.

Question 2

This question tested knowledge of the alcohols and their reactions. The pattern here followed the pattern of question 1 with candidates answering well the questions which tested knowledge which is perhaps more commonly seen and tested at this level. Less commonly tested ideas, such as that of stereoisomerism proved more challenging.

Question 3

Learners scored well in general on this question about reaction kinetics, with many of the marks available from multiple choice questions.

Question 4

This was quite a standard question in examinations at this level and learners were able to show their knowledge of energetics calculations and to explain the use of conditions in industrial processes.

Question 5

This question had an unusual context with candidates having to apply their knowledge of reaction mechanisms to an unusual electrophile in iodine monochloride. Where the learners understood how to do this their answers were clear and diagrams well-constructed. The initial part of the calculation that followed was more traditional but the second again required the candidates to apply their knowledge. This final part of the question proved quite challenging.

Question 6

This question was well answered, with many candidates clearly either having seen the practical involved or having been prepared well for it. The graph work was well attempted though relatively few candidates realised that at higher temperatures the final volume of the gas obtained would be higher than that obtained initially.

Question 7

This question had a number of questions which were practically orientated. Learners found these quite difficult and answers were often lacking in detail and precision. The final question which required logical reasoning and explanation was not well answered by most candidates only a few realising the detail required to get good marks, although most could manage to score something by making a start at the question.

Summary

In order to improve their performance, students should:

- read the question carefully and make sure that they are answering the question that has been asked
- have a detailed knowledge of the definitions supplied within the specification – a glossary of terms is a useful revision tool
- make sure that comparisons are made when required
- be careful with the precision of curly arrows in organic mechanisms
- show all working for calculations and give final answers to an appropriate number of significant figures
- practice questions which apply their knowledge in unusual contexts
- reread questions and answers, where time permits, to avoid careless mistakes.

Grade Boundaries

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