

Chemistry Olympiad

The Chemistry Olympiad paper is a written test of chemical knowledge and understanding. The questions are usually interesting and challenging on real and relevant chemistry, raising awareness of what the subject is all about. Tackling the paper provides a good opportunity to develop some of the skills required for study at university and beyond. But don't think that just because you find them hard that you would not be a suitable Chemistry undergraduate – the questions are meant to be very hard so don't let them dissuade you from furthering your study of Chemistry. There is no doubt that these questions are demanding: they do not rely on the relatively easy recall of information which you may have met before, but instead on thinking and trying to work out answers to unfamiliar questions – this is much more difficult. Success is often achieved by sheer determination and not giving up.

There is lots you can do to give yourself the best chance of achieving a certificate in the Chemistry Olympiad and outlined below are the different things that you can do – you won't want to do all of the past papers but reading through the Chemistry Olympiad Support booklet, attempting some past paper questions and watching some if not all of the Chemistry Olympiad Bites videos will help you to gain an understanding of what to expect and how to approach some of the questions.

Let's be realistic – whilst the questions are very hard the marks required for each certificate reflects this difficulty. In 2013, Gold was awarded to marks over 31/63, Silver to marks 20-10/63 and Bronze to 12-19/63.

Olympiad Support Booklet

This can be downloaded at this site: <http://www.rsc.org/learn-chemistry/resource/res00001149/chemistry-olympiad-support-booklet>. This booklet contains recent Olympiad questions which are typical; they may seem 'impossible' at first sight, but the authors have tried to show how it is possible to work out the answers, sometimes by seeing analogies to what they have done, sometimes piecing data together rather like a jigsaw puzzle. The style of each solution is varied and reflects the different approaches of the individual teachers who write different questions. The use of this booklet is a useful way to prepare most effectively.

The aim of these worked answers is to provide you with a set of examples which you can attempt prior to taking the paper.

The questions chosen cover a range of subjects and present a varying degree of challenge to the students.

Olympiad Chemistry Bites video tutorials

<http://www.rsc.org/learn-chemistry/resource/listing?searchtext=chemistry+olympiad+bites>

These video tutorials take the questions below and explain how they can be answered. They are incredibly useful to help you appreciate the type of thinking that you need to use to undertake certain questions.

Little difficulty

2006 Paper, Question 1: *Sherbet lemons*

2011 Paper, Question 3: *The chemistry of explosives*

Moderate difficulty

2009 Paper, Question 3: *The chemistry of matches*

2010 Paper, Question 1: *Synthesis of the perfume ingredient Ambergris*

High difficulty

2007 Paper, Question 3: *Phosphate levels in the environment*

2010 Paper, Question 6: *Gold leaf*

Past Papers and Markschemes

<http://www.rsc.org/Education/events-and-competitions/Olympiad/olympiad-questions-answers.asp>

The flow chart below shows one way in which the questions could be used;

