

Judged against the guidelines laid down by DoE, this paper successfully assessed the outcomes, aims and objectives of the syllabus/policy documents, and as such is deemed as being of an appropriate standard. Both the 'percentages per topic' and taxonomy of cognitive levels' were closely adhered to; although there were a number of questions which could be construed as being 'off –syllabus' (namely, Q1.3; Q3.2.1 & Q3.2.2; Q9.2.2-4). However this is not to say that candidates failed in all instances to answer each of these questions correctly.

With a marking memo that was quite insistent of a correct use of language (in the description and explanation of observations/phenomena); teachers would in future be well advised to pay close attention to the development of *appropriate language use* amongst their learners.

In terms of performance, the MCQs were generally well answered with the majority of candidates scoring between 24-36/60 in this section of the paper. The more poorly answered (and difficult) questions were: Q1.3; 1.7 ; 1.9 & 1.13. The almost complete absence of correct answers to Q1.7 suggests a fairly narrow understanding of the *neutralisation* process. As before, MCQs such as this are regarded as being particularly useful instructional tools in helping to clarify learners' conceptual misunderstandings.

Question 2 was generally reasonably well answered, most candidates successfully answered the two *Gas Laws* calculations (Q2.5.2.3 & 2.6); with a pleasing range of alternatives offered in Q2.5.2.3.

Question 3 was well answered. As per Guideline Document candidates are expected to be aware of *all steps* in the *Contact Process*. Even though 3.2 can be regarded as being 'off-syllabus' (a correct explanation of the bleaching action of chlorine water involves oxygen free radicals), most candidates were able to correctly answer this question.

Question 4 involves a very familiar reaction between *nitric acid and copper*, and consequently sub-sections 4.1-4 were well answered. However few candidates were able to explain *why* it is that water moves up into the test tube.

Question 5 was a relatively easy '*rates of reaction*' question and marked as such. It does however appear as if some candidates incorrectly interpreted 5.4 and answered '*16 minutes*' as the time in which only half of the calcium carbonate had reacted.

Question 6 contained one of the two D-level problems (Q6.1) in this paper. The level of difficulty of this *Equilibrium Constant* calculation is reflected in learner-performance; very few of whom scored full (9) marks.

Question 7: Fewer candidates than anticipated were able to correctly answer the second D-level question (Q7.2.2) in *Acids & Bases* – highlighting once again the difficulties the majority of candidates have with questions involving calculations of this kind. When asked, in Q7.1: ‘What is meant by a *dilute acid solution*?’ few candidates offered an explanation in terms of $[H^+]$, and were penalised accordingly.

Question 8: A number of sub-sections (Q8.4 & 8.5) in the question dealing with *Electrochemical Cells* were also poorly answered. There seem to be a number of misconceptions in many candidates minds as to why there is an *increase in mass of the lead plate* and the *movement of charge* through the internal circuit.

Question 9: It is accepted that Q9.2 contained elements that were ‘off-syllabus’; this said it is disturbing how many candidates sought to explain ‘change in phase’ in terms of *intramolecular* forces (i.e. bonds being broken inside molecules). This would seem to indicate that are not really fully conversant with the *Kinetic Theory*.

All in all, performance in this paper was lower than in 2005.