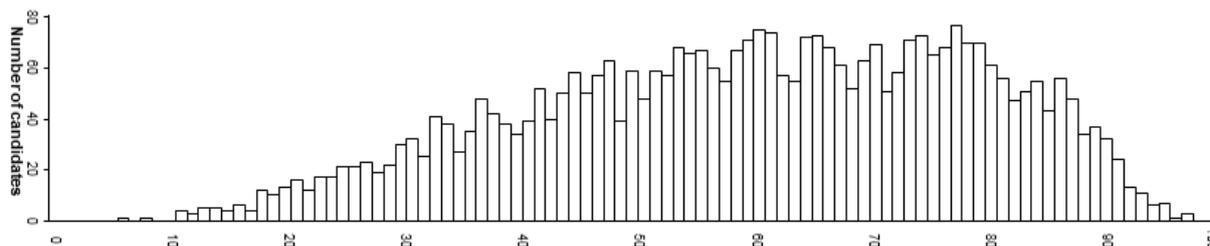




Summary report for candidates on the 2014 WACE examination in Chemistry Stage 3

Year	Number who sat	Number of absentees
2014	3658	32
2013	4874	45
2012	4743	50

Examination score distribution



Summary

The mean of this year's examination paper was 60.3% and a standard deviation of 18.91%. The examination produced a normal distribution amongst the cohort and allowed very able candidates to perform well. The paper was a good discriminator, producing scores ranging from 6.22% to 97.81%. The sectional means and reliability were as follows: Section One (multiple-choice), 70.0% and 0.86, Section Two (short answer), 56.4% and 0.94, Section Three (extended answer) 57.6% and 0.96. The internal reliability of the exam was therefore very good.

Section One: Multiple-choice	Mean 17.51(/25) Max 25.00 Min 3.00
Section Two: Short answer	Mean 19.75(/35) Max 34.27 Min 0.00
Section Three: Extended answer	Mean 23.05(/40) Max 39.76 Min 0.00

General comments

Items in the Section One (multiple-choice) worked very well. Questions 6, 16, and 21 were the most difficult, with means of less than 50%. Questions 2, 4, 11 and 15 were the easiest, with means greater than 85%. In Section Two the means ranged from 37.0% to 80.3%. Questions 30, 31, 32, 35 and 36 had means of less than 50%. In Section Three (Extended answer), the means ranged from 51.3% to 71.6%. Questions 38, 40, 41 and 42 had means in the fifties whilst Questions 37 and 39 had means in the seventies. Most candidates (94.0%) attempted the last question, indicating that the paper was of an appropriate length. The weighting of calculations in the examinations was 21.9% of the paper, towards the upper end of the range (15-25%) required in the examination design brief.

The mean of 60.3% for the whole paper was higher than the mean in 2013 of 54.6%. The means for each section of the paper were higher in 2014 than in 2013. Hopefully many candidates, for whom this examination was their last experience of Chemistry, left with a positive attitude for the subject. It is interesting to note that the mean for Section Three was slightly higher than the mean for Section Two, perhaps reflecting the easier Questions 37 (mole calculation) and Question 39 (empirical formula).

Advice for candidates

- Read questions carefully and answer the question that is asked.
- Understand intermolecular and intramolecular bonding and how theories on bonding can be used to explain the properties of materials.
- Words like 'state' and 'explain' have specific meaning when used in an examination. State means to express the main points in a topic. Explain means to relate cause and effect; provide why and/or how.
- The term 'core charge' and how it differs from 'nuclear charge' need to be understood if it is to be used in an explanation.