Examination report – June 2014 series

2730-020 Advanced Mathematics 1

Section 1 – Areas of good performance
Syllabus reference: 1.10 / 1.11 / 1.12 / 1.13 / 1.15 – Linear law fitting. The straight line graph was reasonably well understood by many candidates. Syllabus reference: 1.28 / 1.29 / 1.30 / 1.31 / 1.33 – Complex numbers. Conversion from Cartesian to polar form was reasonably well understood by candidates. Syllabus reference: 1.17 – Binomial expansion Many candidates obtained good marks for the binomial expansion. Syllabus reference: 1.70 / 1.72 – Permutations and combinations; probability Some candidates obtained good marks for the binomial distribution and probability calculations. Syllabus reference: 1.6 / 1.7 / 1.8 / 1.9 - Linear law fitting. Inverse proportion was reasonably well attempted. Syllabus reference: 1.43 / 1.45 / 1.48 / 1.49 / 1.50 – Trigonometry. Sinusoidal form was well attempted by many candidates. Graphical sketches produced some marks for many candidates. Syllabus reference: 1.55 / 1.56 / 1.57 / 1.58 – Calculus. Some candidates obtained good marks for turning point although the sketch was poorly attempted. Definite integrals was reasonably attempted by many candidates. Syllabus reference: 1.62 / 1.63 / 1.64 – Permutations and combinations; probability. Permutation and combination was well attempted by many candidates. Syllabus reference: 1.21 / 1.23 / 1.25 – Graphs. Changing a logarithmic term to a straight line form and exponential calculation was reasonably well attempted by some.
Section 2 – Areas for development
Syllabus reference: 1.28 / 1.29 / 1.30 / 1.31 / 1.33 – Complex numbers. Evaluating products and quotients in Cartesian form was not very well attempted by many candidates. Syllabus reference: 1.2 / 1.3 – Quadratic functions Solving quadratic equations proved difficult for some candidates. Syllabus reference: 1.52 – Trigonometry. Very little idea of compound angle form was evident. Syllabus reference: 1.31 / 1.34 – Complex numbers. Cartesian/polar manipulations were generally poorly attempted. Syllabus reference: 1.43 / 1.45 / 1.48 / 1.49 / 1.50 – Trigonometry. Compound angle proof was poorly understood by many candidates.

Syllabus reference: 1.62 / 1.63 / 1.64
Probability calculations were rather poorly attempted.