Examination report – December 2012 series

2730-020 Advanced mathematics 1

Section 1 – Areas of good performance / Areas for development
Syllabus reference: 1.49, 1.50. Most candidates obtained marks on sinusoidal function calculations; however, many marks were poor. Syllabus reference: 1.1, 1.2, 1.3, 1.17. Binomial theorem expansion was well attempted by many candidates. Solving a quadratic by factorising was reasonably well achieved by many candidates. Determining a quadratic equation given its roots was reasonably achieved by many. Syllabus reference: 1.20, 1.62, 1.63, 1.64, 1.66. Many candidates obtained some marks for probability calculations. Permutations and combinations well understood by most. Syllabus reference: 1.6, 1.7, 1.8, 1.27, 1.28, 1.31, 1.36. Complex numbers reasonably attempted by many. Most candidates obtained marks on inverse proportion. Syllabus reference: 1.28, 1.30, 1.31. Variable results by candidates on complex number calculations. Syllabus reference: 1.10, 1.11, 1.12, 1,13, 1.15. Determination of law with straight line graph was very poorly understood by many candidates. Syllabus reference: 1.46, 1.47, 1.52. Trigonometric calculations of compound and double angles was poorly understood by the majority of candidates. Syllabus reference: 1.55, 1.57, 1.58, 1.60. Proof of mean value was poorly attempted by many candidates. Some candidates obtained good marks for differentiation. Definite integral rather poorly attempted by many candidates. Syllabus reference: 1.20, 1.21, 1.26. Some candidates obtained some good marks for rearranging into a straight line form. Curve sketching was not well understood by the majority of candidates. Syllabus reference: 1.68, 1.70. Probability theory was not understood well by most candidates.