Functional Mathematics SG P2   **November 2007**

The candidates' work was neat and orderly. The instructions were fairly well implemented. There were a few candidates who answered more than the prescribed number of sections. Sections A and B were compulsory and were answered by most of the candidates. The questions chosen from the remaining four sections were not answered very well. Rounding-off errors also occurred. Candidates did not use their sketch pages.

SECTION A: ANALYTICAL GEOMETRY

QUESTIONS 1 and 2
This section was fairly well answered. Most candidates used the correct formulae, substituted the correct values and presented appropriate answers. Some candidates calculated midpoints when they were supposed to calculate gradients, or vice versa. Question 1 was the best-answered question.
Question 1.5: Some candidates were unable to indicate that the product of gradients of perpendicular lines is equal to –1
Question 2: Few candidates could calculate the x-intercept of a straight line. They also had difficulty in determining the equation of a straight line or circle.

SECTION B: TRIGONOMETRY

QUESTIONS 3, 4 and 5
This section was well answered.
A common error was the decision to use the sine formula for all questions. Candidates had some difficulty with Question 4, which tested the cosine formula. Rounding-off errors occurred frequently in this question.

SECTION C: CIRCULAR MEASURE

QUESTIONS 6 and 7
Question 6 was fairly well answered, but Question 7 was answered poorly. A few candidates did not even attempt to answer Question 7, although they chose this section. Candidates did not know how to convert ? radians to degrees e.g. $\frac{1}{4}$? = 45°. (Question 6.2). Question 7.2 was also answered poorly because candidates did not know the formula for volume.

SECTION D: RATIO PROPORTION AND SIMILARITY

QUESTIONS 8 and 9
Generally speaking, this section was answered fairly well. Most candidates tried to do this section, although they did not always write down the ratio of sides correctly. (Question 8.1.1, 8.2.1, 8.2.6 and 9.2.2). Also, candidates could not write down the correct order of similar triangles. (Question 8.2.5)

SECTION E: CONSUMER MATHEMATICS

QUESTIONS 10 and 11
Generally speaking, this section was poorly answered. Question 10.1 was answered fairly well, although candidates did not take into consideration that interest was compounded quarterly. Question 10.2 was answered poorly. Candidates could not apply the instalment formula correctly. Question 11 was also answered poorly.

SECTION F: STATISTICS

QUESTIONS 12 and 13
This section was very poorly answered. Only a few candidates chose this section. They had no knowledge of standard deviation (Question 12.7) or cumulative percentage curve (Question 13.2). It is clear that this section is not taught in schools, nevertheless some candidates tried to answer this question.