



**FIRE SAFETY MANAGER COURSE
PRE-ENROLMENT TEST**

MATHEMATICS

1. ASSESSMENT OBJECTIVES

The test demands understanding of the basic mathematical concepts and their applications, together with an ability to show this by clear expression and careful reasoning.

In the test, importance is placed on the skills in algebraic manipulation and the numerical accuracy in calculation.

The test will evaluate the candidates following abilities:

- a. Recognise the appropriate mathematical procedure;
- b. Perform calculations by suitable methods;
- c. Use common system of units;
- d. Estimate, approximate and use appropriate degrees of accuracy;
- e. Interpret, use and present information in written, graphical, diagrammatic and tabular forms;
- f. Recognised and apply spatial relationships in two and three dimension;
- g. Understand and use mathematical language and symbols to present mathematical arguments in a logical and clear fashion; and
- h. Formulate problems into mathematical terms, select, apply and communicate appropriate techniques of solution and interpret the solutions in terms of the problems.

2. FORMAT OF ASSESSMENT

<u>Sections</u>	<u>Type</u>	<u>Max. Mark</u>
Section A	Short questions	70
<i>Candidates are to answer all 10 short questions.</i>		
Section B	Structured questions	30

Candidates are to answer 3 out of 5 questions.

Total duration of the pre enrolment test is one hour. Candidates may use mathematical tables, slide rules and calculators during the test.

Candidates are advised that the test may cover the entire syllabus, as stipulated below. Each section may contain questions from any part of the syllabus and will not necessarily be restricted to a single topic.

3. SYLLABUS

The syllabus shall be similar to the GCE O Level, Mathematics (D), including but not limited to the following.

- a. Number, Estimation, Ratio, Proportion and Rates
- b. Set language and notation
- c. Squares, square roots, roots
- d. Ordering, Standard form
- e. The four operations
- f. Graphs of functions
- g. Algebraic representation and formulae
- h. Indices
- i. Solutions of equation and inequalities
- j. Symmetry, Trigonometry
- k. Statistics, Probability
- l. Matrices, Transformations
- m. Vector in two dimensions

To Pass the Entrance Test, Candidates have to obtain at Least 50% of the Total Score.