1. **Examination format**

The format of the examination was changed in 2001. Now the examination has only 1 paper, of 2 hours and 30 minutes in length. The full mark of the paper is 110.

There are 2 sections in this paper. In Section A, which carries 62 marks, students are required to answer about 12 questions. In Section B, which carries 48 marks, students can choose 4 out of 6 questions.

Some students think that they can get a good result by studying just only a few topics. However, it is found that very often, a question may involve 2 or more topics, so you must cover more topics when you prepare.

2. **Requirements of different results**

- Pass: ~ 35 marks
- Grade C: ~ 68 – 70 marks
- Grade A: > 90 marks

3. **Marking scheme**

3.1 A (accuracy): i.e. the marks of correct answers. Note that the answers should be **exact values** unless otherwise specified (e.g. $\sqrt{2}, \pi$).

3.2 M(method): i.e. appropriate use of techniques and formulae, reasonable explanations of questions.

3.3 2 cases of mark deduction:

- P.P. (poor presentation): e.g. missing lim in limits problem, missing vector symbol, using radian and degree in the same question.
- U (unit) The deduction due to P.P. is up to 3 marks and due to U is 1. Actually, these careless mistakes may lower your grade in public examinations.
4. Techniques of answering examination questions

4.1 Review each topic
  
  - Quadratic functions and equations  
    e.g. nature of roots, graphs  
  - Inequalities  
    e.g. absolute values  
  - Mathematical induction  
    e.g. identities, divisibility  
  - The binomial theorem  
    e.g. coefficient, constant term  
  - Trigonometric equations and general solutions  
  - 2D and 3D problems*  
  - Straight lines  
    e.g. distance, angle, family of straight lines  
  - Circles  
    e.g. tangent, family of circles  
  - Vectors*  
    e.g. position vectors, section formula, dot product  
  - Techniques of differentiation  
    e.g. product rule, quotient rule, chain rule, maximum and minimum  
  - Application of differentiation*  
    e.g. tangent, graph sketching, rate  
  - Simple techniques of integration*  
    e.g. Trigonometric integration, reduction formulae  
  - Application of integration*  
    e.g. original curve, area, volume of revolution

* These topics appeared frequently in Section B.
4.2 Understand the keywords

Students have to make a clear and full understanding of each symbol, term, concept and keyword. They should avoid mixing the line of tangent up with line of normal.

In addition, the followings are the words which are commonly used in examinations:

- Solve (usually this involves finding the answers of equations)
- Prove/Show that (this requires students to find the relationship of some mathematics properties)
- Write down (need not write down the steps)
- State (point out some geometric or mathematical relationship)
- Expand
- Sketch (need not draw on the graph paper)
- Find the range of values of x (the answer is always an inequality)
- Find the general solution … … (this always appears in trigonometry)
- Hence (students have to use the result of the previous part of the question)
- By considering … (students have to think of some properties for calculation)
- Using … … (students have to use some special relationship to tackle problems)
4.3 Think deeply about the structure of long questions

Most of the questions in Additional Mathematics are structure-type questions, which means that the later part of the question can be solved only when the former part is solved. Therefore, when a student finishes a question, he/she needs to think about the structure, the concept and the techniques used in the whole question. Then the skills of tackling problems will be accumulating.

4.4 Improve your presentation techniques

One of the comments in the report of public examination results is that students are weak in providing proofs and explanations. Therefore, you should do more practice in using words and mathematical symbols to explain concepts. Moreover, learning how to use complete and logical steps to tackle different questions is a must to get better results.