



## Final Exam Preparations (Distribution of topics)

Question No.	Topics	Question No.	Topics
1	Functions, Exponential and Logarithmic functions	5	Binomial Theorem and Applications
2	Trigonometry	6	Matrices and Applications
3	Remainder and Factor Theorems, Partial fractions	7	Complex Numbers
4	Numerical Methods	8	Sequence & Series

**Each question carries 10 marks**



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- Formula sheet will be provided in the exams (attached at the back of the question paper).
- Practice questions from problem sheets, seminars, past exam papers, and sample papers (available on Moodle).
- Take a **permissible** calculator to the exam (set it to RADIAN mode).
- Answer questions in ANY order, but if you start with Q.4, write answers for all its sub-questions (i.e. 4(a), 4(b), etc.) together.
- Write question number clearly (in the left margin) in your answer book.
- You **MUST** write your answers with a ball-point pen only (**no pencils**).
- Do not get stuck on any one question; move ahead if you don't get the answer. You have around 10 minutes to answer one full question.



## Final Exam Preparations (Drop-in sessions)

Should you wish to attend one-to-one drop-in sessions, with help on a specific topic, please send an email to

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with a request for revising one or more topics.



## Those on the borderline, are advised to cover **at least** the following:

- Completing the square, problems on inequalities.
- Finding inverse of linear functions.
- Examples on rules of logarithms.
- Expressing in  $R \cos(x - \alpha)$  form.
- Prove that type problems in Trigonometry.
- Problems on Remainder and Factor Theorems.
- Problems on the method of Synthetic Division.
- Expressing polynomial function  $p(x)$  completely as a product of linear factors.
- The method of Partial fractions.
- Term with / coefficient of  $x^N$  in the expansion of  $(a + b)^n$ .
- Applying Iteration method when the iterative formula is given (with emphasis on d.p.).
- Simplification of complex numbers in  $a + ib$  form, including use of  $i^2, i^3$ , etc.
- Problems on properties on modulus, polar form of a complex number.
- Matrix method for solving system of linear equations, Matrix multiplication.
- A.P. and G.P., use of formula  $S_n = \frac{n}{2}(2a + (n - 1)d)$ ,  $S_n = \frac{a(1-r^n)}{1-r}$ .
- Infinite G.P., use of formula  $S = \frac{a}{1-r}$ .