Module 1

Module 2

Module 3

Module 4

4.2 : Cauchy-Riemann equations in Cartesian coordinates (without proof).

4.3 : Milne-Thomson method : Determine analytic function f (z) when real part (u), imaginary part (v) or its combination (u + v / u – v) is given.

4.4 : Harmonic function, Harmonic conjugate and Orthogonal trajectories.

Module 5

Chapter 5 : Statistical Techniques 5-1 to 5-40

Syllabus :

5.1 : Karl Pearson's coefficient of correlation (r).

5.2 : Spearman's Rank correlation coefficient (R) (with repeated and non-repeated ranks).

5.3 : Lines of regression.

5.4 : Fitting of first-degree and second-degree curves.

Module 6

Chapter 6 : Probability 6-1 to 6-34

Syllabus :

6.1 : Definition and basics of probability, Conditional probability.

6.2 : Total Probability theorem and Bays' theorem.

6.3 : Discrete and continuous random variable with probability distribution and probability density function.

6.4 : Mathematical Expectation, Variance and covariance.

6.5 : Moment generating function, Raw and central moments up to fourth order.

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