

7208

Syllabus For BCA Course For Batch (2007-2010)-effective From July 2007

3BCA5(B) -ADVANCED CALCULUS AND MATRICES

UNIT-I

Derivative as tangent to a curve, continuity and differentiability, limit and derivative, derivative of products and composite functions, Leibnitz rule and chain rule.

UNIT-II

Expansion of function by Maclaurin's theorem, Taylor's theorem, Partial differentiation, Total differentiation coefficient, Homogeneous function, Euler theorem.

UNIT-III

Integral as anti - derivative, integration by parts, change of variable, integration of rational and irrational functions, definite integral, definite integral as a limit of a sum, application of definite integral to find sum of infinite series.

UNIT-IV

Differential Equation: Solution of ordinary differentiation equations, solution of first order and first degree differential equation, first order and higher degree differential equation, Linear differential equation of second order.

UNIT-V

Matrix: Solutions of system of Linear equation using matrix method, Rank of Matrix, Consistency of the linear system, Eigen value and Eigen vectors.

Text & Reference Books :

- Engg Mathematics** - S.S. Sastry
- A Text book of differential Calculus** - Gorakch. Prasad
- A Text book of Integral Calculus** - Gorakch. Prasad