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**(II) SYLLABI AND MODEL QUESTIONS FOR: M. Tech. in Industrial
Mathematics and Computer Application of Kuvempu University / M. Tech.
(Computer Science and Technology / Computer Cognition Technology) of
Mysuru University**

MATHEMATICS AND COMPUTER SCIENCE

Mathematics:

Differential Calculus - Derivatives of any order, Derivatives of functions, curves, Polar coordinates, Partial Differentiation, Integral Calculus - Integrals of standard function, Reduction formulae, Applications, Differential equation - Up to second order homogeneous equations, Solutions using Laplace transforms.

Probability - Events, Sample space, Basic Theorems, Conditional probability, Independence, Statistics - Frequency tables, Histograms, Measures of average and dispersion, Combinatorial analysis - Permutations & Combinations, Linear and Non-Linear equations - Solution, Application, Set theory - Basic concepts, Operations on sets, Venn diagrams, De Morgan's law, Power sets, Relations - Composite, Equivalence, Recurrence, Number system - Binary, Ternary and other, Logic - Operators, Truth tables, Tautologies,

Computer Science

Fundamental of Computers, Office Automation, Basics of Internet, Types of software

'C' Computer Language

Basic Data types, Fundamental of C programming, Control structure, Bit wise operators, Storage classes, Functions, Arrays, Pointers, Data Structure and file operations.