



KONGU ARTS AND SCIENCE COLLEGE
(An Autonomous Institution, Affiliated to Bharathiar University, Coimbatore)

ERODE – 638 107

DEPARTMENT OF MATHEMATICS
VALUE ADDED COURSE – SYLLABUS
18VMMFM – FOUNDATIONS OF MATHEMATICS I

Course Objective: The objective of the programme is to motivate the students to gain knowledge about quantitative skills to analyze and learn problems in systematic manner.

UNIT I	Set Theory	4 Hours
Definitions – Set operations and its law–Cartesian product – problems based on Venn diagram.		
UNIT II	Matrices	4 Hours
Definitions – Properties – Addition, Subtraction and Multiplication-Determinants – Adjoint and Inverse a of matrix.		
UNIT III	Vedic Mathematics	4 Hours
Addition - Completing the whole- Addition from left to right - Addition of list of numbers.		
UNIT IV	Vedic Mathematics	4 Hours
Subtraction - Base method - Subtraction - Completing the whole- Subtraction from left to right.		
UNIT V	Statistics	4 Hours
Graphic representation of Data- Diagrams: Bar diagram and Pie diagrams.		
Total Hours		20 Hours

Books for Reference:

1. PA.Navnitham “Business Mathematics & Statistics” , Jai Publishers, 2011.
2. “Fundamentals and applications of vedic Mathematics” ,State Council of Educational Research & Training Varun Marg, Defence Colony, New Delhi-110024.



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DEPARTMENT OF MATHEMATICS
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18VMMFM – FOUNDATIONS OF MATHEMATICS II

Course Objective:


To introduce the students the concepts of Mathematics which emphasis on analytical ability needed in competitive examinations.

UNIT I	Equations	4 Hours
Introduction-Simple equation-Simultaneous Linear Equations in two unknowns-Method of solution – Related problems.		
UNIT II	Permutation	4 Hours
Introduction-The factorial-Permutations--Circular Permutations-Permutation with restrictions - Related problems.		
UNIT III	Combinations	4 Hours
Introduction-Combinations-Standard results - Related problems.		
UNIT IV	Sequences and Series	4 Hours
Sequences - Series - Arithmetic Progression - Geometric Progression - Related problems.		
UNIT V	Average	4 Hours
Basic arithmetic: Order of precedence and brackets - Related problems.		
Indices, standard form and engineering Notation: Indices - Worked problems on indices.		
Total Hours		20 Hours

Books for Reference:

1. "Quantitative Aptitude", The Institute of Chartered Accountants of India, 2012.
2. "Basic Engineering Mathematics" Fourth Edition ,John Bird, B.Sc(Hons), CMath, CEng, FIMA, IEE, FIIE(Elec), FCollP, An imprint of Elsevier, 2005.




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