



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

ERODE – 638 107

DEPARTMENT OF MATHEMATICS
VALUE ADDED COURSE – SYLLABUS
18VMMIM – INTERACTIVE MATHEMATICS -I

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

UNIT I	Trigonometry	4 Hours
The theorem of Pythagoras - Problems related to Pythagoras theorem - Trigonometric ratios of acute angles - Solution of right-angled triangles - Angles of elevation and depression - Related Problems.		
UNIT II	Areas of plane figures	4 Hours
Mensuration - Properties of quadrilaterals - Problems on areas of plane figures - Areas of similar shapes - Related problems.		
UNIT III	The Circle	4 Hours
Properties of circles - Arc length and area of a sector - The equation of a circle - Related problems.		
UNIT IV	Volumes of common solids	4 Hours
Volumes and surface areas of regular solids - Problems on volumes and surface areas of regular solids.		
UNIT V	Simple and Compound Interest	4 Hours
Definition of Interest and some other Related terms - Simple Interest and Compound Interest - Related problems. Business Applications of Differentiation and Integration.		
Total Hours		20 Hours

Books for Reference:

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



Dr. N. RAMAN
PRINCIPAL,
KONGU ARTS AND SCIENCE COLLEGE
(AUTONOMOUS)
NANJANAPURAM, ERODE - 638 107,



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DEPARTMENT OF MATHEMATICS

VALUE ADDED COURSE – SYLLABUS

18VMMIM – INTERACTIVE MATHEMATICS -II

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

UNIT I	Permutations	4 Hours
Introduction-The factorial-Permutations-Results-Circular Permutations-Permutation with Restrictions Related problems.		
UNIT II	Combinations	4 Hours
Combinations – Standard Results - Related problems.		
UNIT III	Sequences and Series	4 Hours
Sequences – Series – Arithmetic Progression – Geometric Progression - Related problems.		
UNIT IV	Measures of central Tendency and Dispersion	4 Hours
Measures of central tendency - Mean, median and mode for discrete data - Mean, median and mode for grouped data - Standard deviation.		
UNIT V	Basic arithmetic	4 Hours
Basic arithmetic : Order of Precedence and Brackets. Indices, standard form and engineering notation : Indices - Worked problems on indices		
Total Hours		20 Hours

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