GOPALAN PRE UNIVERSITY COLLEGE(AS752)
Subject & Code: Basic Maths(75)

CONTENTS

UNIT I

ALGEBRA

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CHAPTER 5 PROGRESSSIONS (Total-12 Hrs)

5.1 Introduction
5.2 Sequences
5.3 Series
5.4 Arithmetic progressions
5.5 n_{th} term of an A.P
5.6 Sum to 'n' terms of an A.P
5.7 Geometric progression
5.8 n_{th} term of G.P
5.9 Sum to n terms of G.P
5.10 Sum to infinite G.P
5.11 Harmonic progression
5.12 n_{th} term of H.P
5.13 Arithmetic, Geometric and harmonic means

CHAPTER 6 THEORY OF EQUATIONS (Total - 12 Hrs)

6.1 Introduction and definition of equation
6.2 Degrees of the equation and different types of equations
6.3 Linear equation in one variable
6.4 Simultaneous linear equation in two variables and different methods
6.5 Quadratic equation and its solution
6.6 Nature of the roots of quadratic equation
6.7 Cubic equation, examples and solution
6.8 Synthetic division

CHAPTER 7 LINEAR INEQUALITIES (Total - 6 Hrs)

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7.2 Inequalities
7.3 Linear inequalities in one variable
7.4 System of linear inequations in one variable
7.5 Application of Linear inequalities
7.6 Linear inequalities in two variable
7.7 System of Linear Inequations in two variables and their graphical solution

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UNIT II

COMMERCIALARITHMETIC

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8.1 Introduction
8.2 Simple Interest
8.3 Compound Interest
8.4 Nominal and effective rate of interest
8.5 Varying rate of interest
8.6 Depreciation
8.7 Using compound interest formula for growth rate
8.8 Problems related to simple interest and compound interest

CHAPTER 9 ANNUITIES (Total – 6Hrs)

9.1 Definition and types of annuity immediate
9.2 Future value of annuity immediate
9.3 Present value of annuity immediate
9.4 Future value of annuity due
9.5 Present value of annuity due
9.6 Perpetuity
9.7 Deferred annuity

CHAPTER 10 AVERAGES (Total - 4 Hrs)

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10.2 Types of Averages
10.3 Simple Average
10.4 Weighted Average
10.5 Combined Average

CHAPTER 11 PERCENTAGE, PROFIT AND LOSS
(Total - 6 Hrs)

11.1 Conversion of percentage to ratio fraction, decimal and vice versa
11.2 Percentage increase,percentage decrease
11.3 Application problems involving percentages
11.4 Profit and Loss, Cost price , Selling price, Profit, Loss, Profit percentage, Loss percentage, definition and formula
11.5 Application problems

CHAPTER 12 LINEAR FUNCTIONS (Total - 4 Hrs)

12.1 Introduction
12.2 Definition
12.3 Linear Revenue, Cost and profit function
12.4 Break Even Analysis

UNIT III

TRIGONOMETRY

CHAPTER 13 ANGLES AND TRIGONOMETRIC RATIOS
(Total - 6 Hrs)

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13.2 Measurement of angles
13.3 Trigonometric ratios of acute angle
13.4 Relation between the trigonometric ratios

CHAPTER 14 STANDARD ANGLES AND ALLIED ANGLES
(Total - 6 Hrs)

14.1 Trigonometric Ratios of standard angles
14.2 Signs of Trigonometric ratios
14.3 Allied angles

UNIT IV

ANALYTICAL GEOMETRY

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UNIT - I

ALGEBRA

CHAPTER	NAME OF THE CHAPTER	TEACHING HOURS
1	NUMBER THEORY	08
2	SETS, RELATIONS AND FUNCTIONS	15
3	THEORY OF INDICES	04
4	LOGARITHMS	05
5	PROGRESSIONS	12
6	THEORY OF EQUATIONS	12
7	LINEAR INEQUALITIES	06
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