

SYLLABUS FOR NOVEMBER DECEMBER EXAM

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MATHEMATICS

POST OFFICE ROAD, PAKUR

S.N	NCERT CHAPTERS TO READ	NCERT EXERCISE	RS AGARWAL
1	RELATIONS AND FUNCTIONS 1.1 Introduction 1.2 Types of Relations 1.3 Types of Functions 1.4 Composition of Functions and Invertible Function	EXERCISE 1.1 EXERCISE 1.2 EXERCISE 1.3 With examples 1 - 28, 41 - 44, 46 - 51 Miscellaneous Question 1 - 11, 15 - 19	1A, 1B, OBJECTIVES All the examples 2A, 2B, 2C, 2D OBJECTIVES All the examples
2	INVERSE TRIGONOMETRIC FUNCTIONS 2.1 Introduction 2.2 Basic Concepts 2.3 Properties of Inverse Trigonometric Functions	EXERCISE 2.1 EXERCISE 2.2 With examples 1 - 13 Miscellaneous ALL THE QUESTIONS	4A, 4B, 4C OBJECTIVES All the examples
3	MATRICES 3.1 Introduction 3.2 Matrix 3.3 Types of Matrices 3.4 Operations on Matrices 3.5 Transpose of a matrix 3.6 Symmetric and Skew Symmetric Matrices	EXERCISE 3.1 EXERCISE 3.2 EXERCISE 3.3 Examples 1 - 22, 26 - 28 Miscellaneous ALL THE QUESTIONS	5A, 5B, 5C, 5D, 5F OBJECTIVES All the examples
4	DETERMINANTS 4.1 Introduction 4.2 Determinant 4.3 Properties of Determinants 4.4 Area of a Triangle 4.5 Minors and Cofactors 4.6 Adjoint and Inverse of a Matrix 4.7 Applications of Determinants and Matrices	EXERCISE 4.1 EXERCISE 4.2 EXERCISE 4.3 EXERCISE 4.4 EXERCISE 4.5 EXERCISE 4.6 examples 1 - 34 Miscellaneous ALL THE QUESTIONS	6A, 6B, 6C, OBJECTIVES All the examples 7, OBJECTIVES All the examples 8A, OBJECTIVES All the examples
5	CONTINUITY AND DIFFERENTIABILITY 5.1 Introduction 5.2 Continuity 5.3 Differentiability 5.4 Exponential and Logarithmic Functions 5.5 Logarithmic Differentiation 5.6 Derivatives of Functions in Parametric Forms 5.7 Second Order Derivative	EXERCISE 5.1 EXERCISE 5.2 EXERCISE 5.3 EXERCISE 5.4 EXERCISE 5.5 EXERCISE 5.6 EXERCISE 5.7 examples 1 - 41, 44 - 48 Miscellaneous ALL THE QUESTIONS	9A, 9B, 9C OBJECTIVES All the examples 10A, 10B, 10C, 10D 10C, 10D, 10E, 10F, 10G, 10H, 10I, 10J All the examples
6	APPLICATION OF DERIVATIVES 6.1 Introduction 6.2 Rate of change of Quantities 6.3 Increasing and Decreasing Functions 6.4 Tangents and Normals 6.6 Maxima and Minima	EXERCISE 6.1 EXERCISE 6.2 EXERCISE 6.3 examples 1 - 20 EXERCISE 6.5 examples 26-51 Miscellaneous ALL THE QUESTIONS	11A, & examples 11C, 11D, 11E, 11F, 11G, 11H All the examples OBJECTIVES

SYLLABUS FOR MARCH APRIL EXAM

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MATHEMATICS		POST OFFICE ROAD, PAKUR	
S.N	NCERT CHAPTERS TO READ	NCERT EXERCISE	RS AGARWAL
7	INTEGRALS 7.1 Introduction 7.2 Integration as an Inverse Process of Differentiation 7.3 Methods of Integration 7.4 Integral of some particular Functions 7.5 Integration by partial Fractions 7.6 Integration by parts 7.7 Definite Integral 7.8 Fundamental Theorem of Calculus 7.9 Evaluation of Definite Integrals by substitution 7.10 Some Properties of Definite Integrals	EXERCISE 7.1 EXERCISE 7.2 EXERCISE 7.3 EXERCISE 7.4 EXERCISE 7.5 EXERCISE 7.6 EXERCISE 7.7 examples 1 - 24 EXERCISE 7.9 EXERCISE 7.10 EXERCISE 7.11 examples 27 - 44 Miscellaneous 1 - 39, 41 - 44	12 & examples & OBJECTIVES ; 13A,13B,13C examples & OBJECTIVES ; 14A,14B,14C & examples ; 15A,15B examples & OBJECTIVES ; 16A,16B,16C examples & OBJECTIVES ;
9	DIFFERENTIAL EQUATIONS 9.1 Introduction 9.2 Basic concept	EXERCISE 9.1 examples 1 Miscellaneous Question no. 1	18A, examples & OBJECTIVES ;
10	VECTOR ALGEBRA 10.1 Introduction 10.2 Some Basic Concepts 10.3 Types of Vectors 10.4 Addition of Vectors 10.5 Multiplication of vector by a scalar 10.6 Product of Two Vectors	EXERCISE 10.1 EXERCISE 10.2 EXERCISE 10.3 EXERCISE 10.4 examples 1 - 30 Miscellaneous ALL THE QUESTIONS	22 & examples , 23 & examples, 24 & examples & OBJECTIVES ;
11	THREE DIMENSIONAL GEOMETRY 11.1 Introduction 11.2 Direction Cosines and Direction Ratios of a Lines 11.3 Equation of a Line in Space 11.4 Angle between Two Lines 11.5 Shortest Distance between Two Lines	EXERCISE 11.1 EXERCISE 11.2 examples 1 - 12 examples 26-30 Miscellaneous 1 - 6, 9, 20	26 & examples 27A,27B,27C,27D, 27E,27F & examples & OBJECTIVES
12	LINEAR PROGRAMMING 12.1 Introduction 12.2 Linear Programming Problem and its Mathematical Formulation	EXERCISE 12.1 examples 1 - 5	33B, Q.N : 1,2,3,4,5,6
13	PROBABILITY 13.1 Introduction 13.2 Conditional Probability	EXERCISE 13.1 examples 1 - 7	29A & examples & OBJECTIVES