

BOARD OF INTERMEDIATE EDUCATION

ANNUAL ACADEMIC PLAN 2023-2024

MATHEMATICS-I (A)

Subject Code:- 131

FIRST YEAR

Month/ No.of working days& periods	Topics to be covered /Unit test/ Exams/ Assignments/EAMCET classes to be conducted	Periods allotted for each topic
June 24	03 Matrices:	
	3.1 Types of Matrices	1
	3.2 Scalar multiple of a matrix and multiplication of matrices	4 2
	3.3 Transpose of a matrix	4
	3.4 Determinants	3
	3.5 Adjoint and inverse of matrix	3
	3.6 Consistency and inconsistency of system of simultaneous equations	4
	3.7 Solution of simultaneous line are quations	
	Assignment-I	1
		2
	AP EAPCET CLASSES ON MATRICES	
July 24	<u>01 Functions:</u>	
	1.1 Types of functions –Definitions	3
	1.2 Inverse functions and Theorems	5
	1.3 Domain, Range, and Inverse of real valued functions	3
	Assignment-II	1
	AP EAPCET CLASS ON FUNCTIONS	1
		2
	<u>02 Mathematical Induction:</u>	2
	2.1 Principles of Mathematical Induction and Theorems	2 1
	2.2 Applications of Mathematical Induction	1
	2.3 Problems on divisibility	1
	AP EAPCET CLASS ON INDUCTION	
	UNIT TEST-I	
	(From 26-07-2023 to 28-07-2023)	

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August 25	<u>06 Trigonometric ratios upto Transformations:</u>	6
	6.1 Trigonometric ratios–Variation–Graphs and Periodicity	4
	6.2 Trigonometric ratios of compound angles	4
	6.3 Trigonometric ratios of multiple and sub-multiple angles	3 5
	6.4 Transformations (Sum and Product rules)	1
	Assignment-III	2
	AP EAPCET CLASS ON TRIGONOMETRY UNIT TEST-II (From 24-08-2023 to 26-08-2023)	
September 22	<u>07 Trigonometric Equations:</u>	
	7.1 General solutions of Trigonometric equations	
	7.2 Simple Trigonometric equations– Solutions AP EAPCET ON TRIGONOMETRIC EQUATIONS	2 2 1
	<u>08 Inverse Trigonometric Functions:</u>	
	8.1 To reduce a Trigonometric function into a bijective function	2
	8.2 Graphs of Inverse Trigonometric functions	
	8.3 Properties of Inverse Trigonometric functions	2 2 1
	AP EAPCET ON INVERSE TRIGONOMETRIC FUNCTIONS	1 1 2
	<u>09 Hyperbolic functions:</u>	
	9.1 Definitions of Hyperbolic functions - Graphs	1
	9.2 Definitions of Inverse Hyperbolic functions- Graphs	1 1
	9.3 Addition formulae of Hyperbolic functions	1
	AP EAPCET ON INVERSE HYPERBOLIC FUNCTIONS	
	Assignment-IV	
	QUARTERLY EXAMINATIONS 16.09.2023–23.09.2023	

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October 18	Dussehra Holidays 19.10.2023 to 25.10.2023	2
	<u>Properties of Triangles:</u>	6
	10.1 Relation between sides and angle of a triangle	4
	10.2 Sine, Cosine, Tangent, and Projection rules	4
	10.3 Half angle formulae and areas of a triangle	6
	10.4 In-circle and Ex-circle of a triangle	1
November 25	Assignment-V	2
	AP EAPCET CLASSES ON PROP OF TRIANGLES UNIT TEST-III (From 16-10-2023 to 18-10-2023)	
	<u>04 Addition of Vectors:</u>	1
	4.1 Vector as a triad of real numbers–some basic concepts	1
	4.2 Classification (Types of Vectors)	
	4.3 Addition of Vectors	2
	4.4 Scalar multiplication of a vector	2
	4.5 Angle between two non-zero vectors	2
	4.6 Linear combination of vectors	2
	4.7 Components of a vector in three dimensions	2
	4.8 Vector equations of a line and a plane	2
	EAPCET classes on Addition of Vectors	2
	Assignment-VI	1
	UNITTEST-IV (From 23.11.2023 to 25.11.2023)	1
	<u>05Product of Vectors:</u>	
	5.1 Scalar or dot product of two vectors – Geometrical interpretation – Orthogonal Projections	2
		2

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	5.2 Properties of dot product	2
	5.3 Expression of dot product in $\vec{i}, \vec{j}, \vec{k}$ system – angle between two vectors	2
	5.4 Geometrical vector methods	
December 24	5.5 Vector equations of a plane in normal form	1
	5.6 Angle between two planes	1
	5.7 Vector product (cross product) of two vectors and properties	2 1
	5.8 Vector product in $\vec{i}, \vec{j}, \vec{k}$ system	
	5.9 Vector areas	
	5.10 Scalar triple product	
	5.11 Vector equation of a plane – different forms – skewlines – shortest distance – plane, condition for coplanarity	1 1
	5.12 & 5.13 Vector triple product–results–solved problems	2
	HALF-YEARLY EXAMINATIONS 18.12.2023 to 23-12-2023	1
January 20	ASSIGNMENT-VII	
	EAPCET classes on PRODUCT of Vectors	1
	PREFINAL EXAMINATIONS 19.01.2024 to 25.01.2024	1 6
February 24	Sankranti Holidays 11.01.2024 to 17.01.2024	
	REOPENING AFTER SANKRANTI HOLIDAYS	
March 21	REVISION Practical Exams	
	THEORY EXAMINATIONS IPE-2024	