

TELANGANA STATE BOARD OF INTERMEDIATE EDUCATION: HYDERABAD

ANNUAL ACADEMIC PLAN 2023-2024

MATHEMATICS-I (A)

I 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	Syllabus and pre-requisites 01 <u>Functions :-</u> 1.1 Types of functions – Definitions 1.2 Inverse functions and Theorems 1.3 Domain, Range, Inverse of real valued functions IPASE JUNE 2023 ASSIGNMENT-I	02 05 05 03 08 01
July 23	EAMCET Class on functions 02 <u>Mathematical Induction</u> 2.1 Principle of Mathematical Induction & Theorems 2.2 Applications of Mathematical Induction 2.3 Problems on divisibility EAMCET class on Mathematical Induction 03 <u>Matrices:</u> 3.1 Types of matrices 3.2 Scalar multiple of a matrix and multiplication of Matrices 3.3 Transpose of a matrix 3.4 Determinants UNIT TEST-I ASSIGNMENT- II	01 04 02 02 01 03 03 02 03 01 01
August 25	3.5 Adjoint and Inverse of a matrix 3.6 Solution of simultaneous linear equations 3.7 Consistency and inconsistency of Equations- Rank of a matrix EAMCET classes on matrices TRIGONOMETRY 6 <u>Trigonometric Ratios up to Transformations :</u> 6.1 Graphs and Periodicity of Trigonometric functions 6.2 Trigonometric ratios and Compound angles 6.3 Trigonometric ratios of multiple and sub-multiple angles	04 04 03 02 03 03 04

	UNIT TEST-II	01
	ASSIGNMENT -III	01
September 22	6.4 Transformations - Sum and Product rules	04
	EAMCET class on Trigonometric Ratios up to Transformations	02
	7 <u>Trigonometric Equations:</u>	
	7.1 General Solution of Trigonometric Equations	02
	7.2 Simple Trigonometric Equations – Solutions	02
	8 <u>Inverse Trigonometric Functions:</u>	
	8.1 To reduce a Trigonometric Function into a Bijection	02
	8.2 Graphs of Inverse Trigonometric Functions	01
	8.3 Properties of Inverse Trigonometric Functions	02
	EAMCET class on Trigonometric Equations and Inverse Trigonometric Functions	01
	9 <u>Hyperbolic Functions:</u>	
	9.1 Definition of Hyperbolic Function Graphs	02
	9.2 Definition of Inverse Hyperbolic Functions – Graphs	01
	9.3 Addition formulas of Hyperbolic Functions	01
	UNIT TEST-III	01
	Assignment -IV	01
October 18	10 <u>Properties of Triangles:</u>	
	10.1 Relation between sides and angles of a Triangle	03
	10.2 Sine, Cosine, Tangent and Projection rules	04
	10.3 Half angle formulae and areas of a triangle	03
	10.4 In-circle and Ex-circle of a Triangle	03
	EAMCET class on properties of triangles	02
	04 <u>Addition of Vectors</u>	
4.1 Vectors as a triad of real numbers	02	
	ASSIGNMENT- V	01
FIRST TERM HOLIDAYS FROM 19-10-2023 TO 25-10-2023		
November 24 (18P)	4.2 Classification of vectors	02
	4.3 Addition of vectors	02
	4.4 Scalar multiplication	02
	4.5 Angle between two non- zero vectors	02
	4.6 Linear combination of vectors	02
	4.7 Component of a vector in three dimensions	02

	4.8	Vector equations of line and plane including their Cartesian equivalent forms	02
		EAMCET classes on Addition of Vectors	02
	05	<u>Product of Vectors :-</u>	
	5.1	Scalar Product - Geometrical Interpretations orthogonal projections	02
HALF YEARLY EXAMINATIONS FROM 20-11-2023 TO 25-11-2023			
December 23	5.2	Properties of dot product	02
	5.3	Expression of dot product in i, j, k system - Angle between two vectors	02
	5.4	Geometrical Vector methods	03
	5.5	Vector equations of plane in normal form	03
	5.6	Angle between two planes	01
	5.7	Vector product of two vectors and properties	02
	5.8	Vector product in i, j, k system	03
	5.9	Vector Areas	03
	5.10	Scalar Triple Product	02
			UNIT TEST-IV
		ASSIGNMENT- VI	01
January 23 (17P)	5.10	Scalar Triple Product	05
	5.11	Vector equations of plane in different forms,	05
	5.12	Vector Triple Product – Results	05
		EAMCET class on Vector Product	02
SECOND TERM HOLIDAYS FROM 13-01-2024 TO 16-01-2024			
PRE-FINAL EXAMINATIONS FROM 22-01-2024 TO 29-01-2024			
February 23 (16 P)	REVISION		16
	DATE OF COMMENCE MENT OF PRACTICAL EXAMS 2ND WEEK OF FEB-2024		
March 22	DATE OF COMMENCE MENT OF THEORY EXAMS 1ST WEEK OF MARCH-2024		22
	LAST WORKING DAY :31-03-2024		

Prepared by: **M. VIJAYA SEKHAR**, JL in Maths
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TELANGANA STATE BOARD OF INTERMEDIATE EDUCATION: HYDERABAD

ANNUAL ACADEMIC PLAN 2023-2024

MATHEMATICS-I (B)

I 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	Syllabus and pre-requisites	02
	01 <u>Locus</u>	
	1.1 Definition of locus – Illustrations	03
	1.2 To find equations of locus - Problems connected to it	05
	02 <u>Transformation</u>	
	2.1 Transformation of axes - Rules, Derivations and Illustrations	04
2.2 Rotation of axes - Derivations – Illustrations	01	
	IPASE JUNE 2023	08
	ASSIGNMENT -I	01
July 23	2.2 Rotation of axes - Derivations – Illustrations	03
	EAMCET class on Locus and Transformation of axes	01
	03 <u>The Straight Line</u>	
	3.1 Revision of fundamental results	01
	3.2 Straight line - Normal form – Illustrations	02
	3.3 Straight line – Symmetric form	01
	3.4 Straight line - Reduction into various forms	02
	3.5 Intersection of two Straight Lines.	02
	3.6 Family of straight lines - Concurrent lines.	03
	3.7 Condition for Concurrent lines.	02
	3.8 Angle between two lines.	02
	3.9 Length of perpendicular from a point to a Line.	02
		UNIT TEST-I
	ASSIGNMENT -II	01

<p>August 25</p>	<p>3.10 Distance between two parallel lines. 3.11 Concurrent lines - properties related to a triangle EAMCET classes on straight lines 04 <u>Pair of Straight lines</u> 4.1 Equations of pair of lines passing through origin, angle between a pair of lines 4.2 Condition for perpendicular and coincident lines, bisectors of angles 4.3 Pair of bisectors of angles 4.4 Pair of lines - second degree general equation 4.5 Conditions for parallel lines – distance between them, Point of intersection of pair of lines UNIT TEST-II ASSIGNMENT-III</p>	<p>02 02 01 04 04 03 04 03 01 01</p>
<p>September 22</p>	<p>4.6 Homogenizing a second degree equation with a first degree equation in X and Y EAMCET classes on pair of straight lines 05 <u>Three Dimensional Coordinates</u> 5.1 Coordinates 5.2 Section formulas - Centroid of a triangle and tetrahedron 06 <u>Direction Cosines and Direction Ratios</u> 6.1 Direction Cosines 6.2 Direction Ratios EAMCET classes on 3-D coordinates and Orientation Cosines Direction Ratios 07 <u>Plane</u> 7.1 Cartesian equation of Plane – Simple illustrations UNIT TEST-III ASSIGNMENT -IV</p>	<p>04 01 02 01 04 04 01 03 01 01</p>
<p>October 18</p>	<p>08 <u>Limits and Continuity</u> 8.1 Intervals and neighborhoods. 8.2 Limits. 8.3 Standard Limits 8.4 Continuity EAMCET classes on Limits and continuity ASSIGNMENT-V</p>	<p> 03 04 04 04 02 01</p>

FIRST TERM HOLIDAYS FROM 19-10-2023 TO 25-10-2023		
November 24 (18P)	09 <u>Differentiation</u> 9.1 Derivative of a function 9.2 Elementary Properties 9.3 Trigonometric, Inverse Trigonometric, Hyperbolic Inverse Hyperbolic Function Derivatives 9.4 Methods of Differentiation	03 05 05 05
HALF YEARLY EXAMINATIONS FROM 20-11-2023 TO 25-11-2023		
December 23	9.5 Second Order Derivatives EAMCET classes on Differentiation 10. <u>Applications of Derivatives</u> 10.1 Errors and Approximations 10.2 Equations of tangents and normals 10.3 Geometrical Interpretation of a derivative 10.4 Lengths of tangent, normal, sub tangent and sub normal 10.5 Angles between two curves and condition for orthogonality of curves UNIT TEST-IV ASSIGNMENT -VI	03 02 03 03 03 03 04 01 01
January 23 (17P)	10.6 Derivative as Rate of change 10.7 Rolle's Theorem and Lagrange's Mean value theorem without proofs and their geometrical interpretation 10.8 Increasing and decreasing functions 10.9 Maxima and Minima EAMCET classes on application of derivatives	02 03 04 06 02
SECOND TERM HOLIDAYS FROM 13-01-2024 TO 16-01-2024		
PRE-FINAL EXAMINATIONS FROM 22-01-2024 TO 29-01-2024		
February 23 (16 P)	REVISION DATE OF COMMENCE MENT OF PRACTICAL EXAMS 2ND WEEK OF FEB-2024	16
March 22	DATE OF COMMENCE MENT OF THEORY EXAMS 1ST WEEK OF MARCH-2024 LAST WORKING DAY :31-03-2024	22

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