TELANGANA STATE BOARD OF INTERMEDIATE EDUCATION: HYDERABAD

ANNUAL ACADEMIC PLAN 2024-2025

MATHEMATICS-I (A) **I YEAR**

Month/No. of Working days& Periods	Topics to be covered Unit tests/ Exams/EAPCET classes to be conducted	Periods allotted for each topic
June 23	Syllabus and pre-requisites	**01**
	01 Functions :-	
	1.1 Types of functions – Definitions	**05**
	1.2 Inverse functions and Theorems	**05**
	1.3 Domain, Range, Inverse of real valued Functions	**03**
	02 Mathematical Induction	
	2.1 Principle of Mathematical Induction & Theorems	**03**
	2.2 Applications of Mathematical Induction	**02**
	EAPCET weekly one Class	**03**
	Test on EAPCET	**01**
July 24	2.3 Problems on divisibility	**02**
	03 Matrices:	
	3.1 Types of matrices	**03**
	3.2 Scalar multiple of a matrix and multiplication of Matrices	**03**
	3.3 Transpose of a matrix	**02**
	3.4 Determinants	**03**
	3.5 Adjoint and Inverse of a matrix	**03**
	3.6 Consistency and inconsistency of Equations- Rank of a matrix	**03**
	UNIT TEST-I	**01**
	EAPCET weekly one Class	**03**
	Test on EAPCET	**01**
August 24	3.7 Solution of simultaneous linear equations	**04**
	TRIGONOMETRY	
	6. Trigonometric Ratios up to Transformations :	
	6.1 Graphs and Periodicity of Trigonometric functions	**03**
	6.2 Trigonometric ratios and Compound angles	**04**
	6.3 Trigonometric ratios of multiple and sub-multiple angles	**04**
	6.4 Transformations - Sum and Product rules	**04**
	UNIT TEST-II	**01**
	EAPCET weekly one Class	**03**
	Test on EAPCET	**01**

September 22	**7 <u>Trigonometric Equations</u>:** 7.1 General Solution of Trigonometric Equations 7.2 Simple Trigonometric Equations – Solutions **8 <u>Inverse Trigonometric Functions</u>:** 8.1 To reduce a Trigonometric Function into a Bijection 8.2 Graphs of Inverse Trigonometric Functions 8.3 Properties of Inverse Trigonometric Functions **9 <u>Hyperbolic Functions</u>:** 9.1 Definition of Hyperbolic Function Graphs 9.2 Definition of Inverse Hyperbolic Functions – Graphs 9.3 Addition formulas of Hyperbolic Functions **10 <u>Properties of Triangles</u>:** 10.1 Relation between sides and angles of a Triangle **UNIT TEST-III** **EAPCET weekly one Class** **Test on EAPCET**	 **02** **02** **02** **01** **02** **02** **01** **01** **04** **01** **03** **01**
October 19	10.2 Sine, Cosine, Tangent and Projection rules 10.3 Half angle formulae and areas of a triangle 10.4 In-circle and Ex-circle of a Triangle **04<u>Addition of Vectors</u>** 4.1 Vectors as a triad of real numbers 4.2 Classification of vectors 4.3 Addition of vectors 4.4 Scalar multiplication **EAPCET weekly one Class** **Test on EAPCET**	**03** **03** **02** **02** **02** **02** **02** **02** **01**
FIRST TERM HOLIDAYS FROM 06-10-2024 TO 13-10-2024		
November 24 (18P)	4.5 Angle between two non- zero vectors 4.6 Linear combination of vectors 4.7 Component of a vector in three dimensions 4.8 Vector equations of line and plane including their Cartesian equivalent forms **05 <u>Product of Vectors :-</u>** 5.1 Scalar Product - Geometrical Interpretations orthogonal projections	**02** **02** **02** **02** **02**

	5.2 Properties of dot product 5.3 Expression of dot product in i, j, k system - Angle between two vectors 5.4 Geometrical Vector methods **EAPCET weekly one Class** **Grand Test on EAPCET**	**02** **02** **02** **01** **01**
HALF YEARLY EXAMINATIONS FROM 18-11-2024 TO 23-11-2024		
December 23	5.5 Vector equations of plane in normal form 5.6 Angle between two planes 5.7 Vector product of two vectors and properties 5.8 Vector product in i, j, k system 5.9 Vector Areas 5.10 Scalar Triple Product 5.10 Scalar Triple Product **UNIT TEST-IV** **EAPCET weekly one Class** **Test on EAPCET**	**03** **01** **02** **03** **03** **02** **04** **01** **03** **01**
January 22 (16P)	5.11 Vector equations of plane in different forms 5.12 Vector Triple Product – Results **EAPCET weekly one Class** **Grand Test on EAPCET** **REVISION**	**05** **05** **02** **01** **03**
SECOND TERM HOLIDAYS FROM 11-01-2025 TO 16-01-2025		
PRE-FINAL EXAMINATIONS FROM 20-01-2025 TO 25-01-2025		
February 23	**REVISION** **DATE OF COMMENCE MENT OFPRACTICAL EXAMS 1ST WEEK OF FEB-2025**	**23**
March 23	**DATE OF COMMENCE MENT OF THEORY EXAMS 1ST WEEK OF MARCH-2025** **LAST WORKING DAY :31-03-2025**	**23**

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TELANGANA STATE BOARD OF INTERMEDIATE EDUCATION: HYDERABAD

ANNUAL ACADEMIC PLAN 2024-2025

MATHEMATICS-I (B) **IYEAR**

Month/ No. of working days& Periods	Topics to be covered Unit test/ Exams/ EAPCET classes to be conducted.	Periods allotted for each topic
June 23	Syllabus and pre-requisites	**01**
	01 Locus	
	1.1Definition of locus – Illustrations	**03**
	1.2 To find equations of locus - Problems connected to it	**04**
	02 Transformation	
	2.1Transformation of axes - Rules, Derivations and Illustrations	**04**
	2.2 Rotation of axes - Derivations – Illustrations	**04**
	03 The Straight Line	
	3.1 Revision of fundamental results	**01**
	3.2 Straight line - Normal form – Illustrations	**02**
	EAPCET weekly one Class	**03**
	Test on EAPCET	**01**
July 24	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**
	3.10 Distance between two parallel lines.	**02**
	3.11 Concurrent lines - properties related to a triangle	**03**
	UNIT TEST-I	**01**
	EAPCET weekly one Class	**03**
	Test on EAPCET	**01**

August 24	**04 <u>Pair of Straight lines</u>**	
	4.1 Equations of pair of lines passing through origin, angle between a pair of lines	**03**
	4.2 Condition for perpendicular and coincident lines, bisectors of angles	**03**
	4.3 Pair of bisectors of angles	**03**
	4.4 Pair of lines - second degree general equation	**03**
	4.5 Conditions for parallel lines – distance between them, Point of intersection of pair of lines	**03**
	4.6 Homogenizing a second degree equation with a first degree equation in X and Y	**04**
	UNIT TEST-II	**01**
	EAPCET weekly one Class	**03**
	Test on EAPCET	**01**
September 22	**05 <u>Three Dimensional Coordinates</u>**	
	5.1 Coordinates	**02**
	5.2 Section formulas - Centroid of a triangle and tetrahedron	**02**
	06 <u>Direction Cosines and Direction Ratios</u>	
	6.1 Direction Cosines	**04**
	6.2 Direction Ratios	**04**
	07 <u>Plane</u>	
	7.1 Cartesian equation of Plane – Simple illustrations	**03**
	08 <u>Limits and Continuity</u>	
	8.1 Intervals and neighborhoods.	**02**
	UNIT TEST-III	**01**
	EAPCET weekly one Class	**03**
	Test on EAPCET	**01**
October 19	8.2 Limits	**03**
	8.3 Standard Limits	**04**
	8.4 Continuity	**04**
	09 <u>Differentiation</u>	
	9.1 Derivative of a function	**03**
	9.2 Elementary Properties	**02**
	EAPCET weekly one Class	**02**
	Test on EAPCET	**01**
FIRST TERM HOLIDAYS FROM 06-10-2024 TO 13-10-2024		

November 24 (18P)	9.2 Elementary Properties (remaining part) 9.3 Trigonometric, Inverse Trigonometric, Hyperbolic Inverse Hyperbolic Function Derivatives 9.4 Methods of Differentiation 9.5 Second Order Derivatives **EAPCET weekly one Class** **Grand Test on EAPCET**	**03** **05** **04** **03** **02** **01**
HALF YEARLY EXAMINATIONS FROM 18-11-2024 TO 23-11-2024		
December 23	**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 10.6 Derivative as Rate of change **UNIT TEST-IV** **EAPCET weekly one Class** **Test on EAPCET**	 **03** **03** **03** **03** **04** **02** **01** **03** **01**
January 22 (16P)	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 **EAPCET weekly one Class** **Grand Test on EAPCET** **REVISION**	**03** **03** **06** **02** **01** **01**
SECOND TERM HOLIDAYS FROM 11-01-2025 TO 16-01-2025		
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