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FOR TS CLASS 11 PREPARATION

TS Inter 1st Year Syllabus 2027 Mathematics IB

EXAM	YEAR	TYPE	SUBJECT
TS Class 11	2027	Syllabus	Maths

TELANGANA BOARD OF INTERMEDIATE EDUCATION

Syllabus in Mathematics, Paper - IB

(w.e.f. 2026-27)

Name of the Topic and Sub Topics

COORDINATE GEOMETRY

1. Locus

1.1 Definition of locus - Illustrations

1.2 To find equations of locus - Problems connected to it

2. Transformation of Axes

2.1 Transformation of axes - Rules, Derivations and Illustrations

2.2 Rotation of axes - Derivations, Illustrations.

3. The Straight Line

3.1 Revision of fundamental results

3.2 Straight line - Normal form, Illustrations

3.3 Straight line - Symmetric form

3.4 Straight line - Reduction into various forms

3.5 Intersection of two Straight lines

3.6 Family of straight lines - Concurrent lines

3.7 Condition for Concurrent lines

3.8 Angle between two lines

3.9 Length of perpendicular from a point to a line

3.10 Distance between two parallel lines

3.11 Concurrent lines - properties related to a triangle

4. Pair of Straight lines

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

4.6 Homogenising a second degree equation with a first degree equation in x and y

5. Introduction to Three Dimensional Coordinate Geometry

5.1 Coordinates

5.2 Section formulas - Centroid of a triangle and tetrahedron

6. Direction Cosines and Direction Ratios

6.1 Direction Cosines

6.2 Direction Ratios

7. The Plane

7.1 C artesian equation of Plane - Simple Illustrations

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8. Limits and Continuity

8.1 Intervals and neighbourhoods

8.2 Limits

8.3 Standard Limits

8.4 Continuity

9. Differentiation

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

9.5 Second Order Derivatives

10. Applications of Derivatives

10.1 Errors and Approximations

10.2 Geometrical interpretation of a derivative

10.3 Equations of tangents and normals

10.4 Lengths of tangent, normal, sub tangent and subnormal.

10.5 Angle between two curves and condition for orthogonality of curves

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