TELANGANA STATE BOARD OF INTERMEDIATE EDUCATION: HYDERABAD

ANNUAL ACADEMIC PLAN 2024-2025

MATHEMATICS-II (A) **IIYEAR**

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 Complex Numbers:	
	1.1 Complex number as an ordered pair of real numbers- fundamental operations	**02**
	1.2 Representation of complex numbers in the form a+ib.	**01**
	1.3 Modulus and amplitude of complex numbers – Illustrations.	**03**
	1.4 Geometrical and Polar Representation of complex numbers in Argand plane-Argand diagram.	**03**
	02 De Moivre's Theorem:	
	2.1 De Moivre's theorem- Integral and Rational indices.	**04**
	2.2 n^{th} roots of unity- Geometrical Interpretations – Illustrations.	**03**
	03 Quadratic Expressions:	
	3.1 Quadratic expressions, equations in one variable	**02**
	EAPCET weekly one Class	**03**
	Test on EAPCET	**01**
July 24	3.2 Sign of quadratic expressions – Change in signs – Maximum and minimum values	**04**
	3.3 Quadratic inequations	**03**
	04 Theory of Equations:	
	4.1 The relation between the roots and coefficients in an equation	**02**
	4.2 Solving the equations when two or more roots of it are connected by certain relation	**03**
	4.3 Equation with real coefficients, occurrence of complex roots in conjugatepairs and its consequences	**04**
	4.4 Transformation of equations –ReciprocalEquations.	**02**
	UNIT TEST –I	**02**
	EAPCET weekly one Class	**03**
	Test on EAPCET	**01**

August 24	4.4 Transformation of equations –ReciprocalEquations. **05 Permutations and Combinations:** 5.1 Fundamental Principle of counting – linear and circular permutations 5.2 Permutations of 'n' dissimilar things taken 'r' at a time 5.3 Permutations when repetitions allowed 5.4 Circular permutations 5.5 Permutations with constraint repetitions **UNIT TEST -II** **EAPCET weekly one Class** **Test on EAPCET**	**04** **04** **02** **03** **03** **03** **01** **03** **01**
September 22	5.6 Combinations-definitions and certain theorems **06 Binomial Theorem:** 6.1 Binomial theorem for positive integral index 6.2 Binomial theorem for rational Index (Without proof) **UNIT TEST-III** **EAPCET weekly one Class** **Test on EAPCET**	**04** **08** **06** **01** **02** **01**
October 19	6.3 Approximations using Binomial theorem **07 Partial fractions:** 7.1 Partial fractions of f(x)/g(x) when g(x) contains non –repeated linear factors. 7.2 Partial fractions of f(x)/g(x) when g(x) contains repeated and/or non-repeatedlinear factors. 7.3 Partial fractions of f(x)/g(x) when g(x) contains repeated and non-repeated irreducible factors only **08 MEASURES OF DISPERSION** 8.1 Range 8.2 Mean deviation **EAPCET weekly one Class** **Test on EAPCET**	**05** **02** **02** **02** **02** **03** **02** **01**
FIRST TERM HOLIDAYS FROM 06-10-2024 TO 13-10-2024		
November 24 (18P)	8.4 Variance and standard deviation of ungrouped /grouped data. 8.5 Coefficient of variation and analysis of frequency distribution with equal means but different variances. **09 Probability** 9.1 Random experiments and events **EAPCET weekly one Class** **Grand Test on EAPCET**	**05** **05** **05** **02** **01**
HALF YEARLY EXAMINATIONS FROM 18-11-2024 TO 23-11-2024		

December 23	9.2 Classical definition of probability, Axiomatic approach and addition theorem of probability. 9.3 Independent and dependent events Conditional probability- multiplication theorem andBayee's theorem. **10 Random Variables and Probability Distributions:** 10.1 Random Variables 10.2 Theoretical discrete distributions – Binomial and Poisson Distributions **UNIT TEST-IV** **EAPCET weekly one Class** **Test on EAPCET**	**05** **07** **04** **02** **01** **03** **01**
January 23 (17 P)	10.2 Theoretical discrete distributions – Binomial and Poisson Distributions (remaining part) **EAPCET weekly one Class** **Grand Test on EAPCET** **REVISION**	**04** **03** **01** **09**
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 OF PRACTICAL EXAMS 1S 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**

Prepared by:**M.VIJAYA SEKHAR,**JL in Maths
Govt. Jr. College, BHEL,Ranga Reddy Dist.

TELANGANA STATE BOARD OF INTERMEDIATE EDUCATION: HYDERABAD

ANNUAL ACADEMIC PLAN 2024-2025

MATHEMATICS-II (B) **IIYEAR**

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	**02**
	01. Circle :	
	1.1 Equation of circle -standard form-centre and radius of a circle with a given line segment as diameter & equation of circle through three non collinear points -parametric equations of a circle.	**06**
	1.2 Position of a point in the plane of a circle – power of a point-definition of tangent-length of tangent	**04**
	1.3 Position of a straight line in the plane of a circle-conditions for a line to be tangent – chord joining two points on a circle – equation of the tangent at a point on the circle- point of contact-equation of normal.	**05**
	1.4 Chord of contact - pole and polar-conjugate points and conjugate lines - equation of chord with given middle point.	**02**
	EAPCET weekly one Class	**03**
	Test on EAPCET	**01**
July 24	1.4 Chord of contact - pole and polar-conjugate points and conjugate lines - equation of chord with given middle point.(remaining part)	**03**
	1.5 Relative position of two circles- circles touching each other externally, internally common tangents –centers of similitude-equation of pair of tangents from an externalpoint	**05**
	02. System of circles:	
	2.1 Angle between two intersecting circles.	**05**
	2.2 Radical axis of two circles- properties- Common chord and common tangent of two circles – radical Centre.	**04**
	2.3 Intersection of a line and a Circle.	**02**
	UNIT TEST-I	**01**
	EAPCET weekly one Class	**03**
	Test on EAPCET	**01**

August 24	**06. Integration :** 6.1 Integration as the inverse process of Differentiation- Standard forms –properties of integrals. 6.2 Method of substitution- integration of Algebraic, Exponential, Logarithmic, Trigonometric and Inverse trigonometric functions. Integration by parts. 6.3 Integration- Partial fractions method. **UNIT TEST -II** **EAPCET weekly one Class** **Test on EAPCET**	 **04** **11** **04** **01** **03** **01**
September 22	6.4 Reduction formulae **07. Definite Integrals:** 7.1 Definite Integral as the limit of sum 7.2 Interpretation of Definite Integral as an area. 7.3 Fundamental theorem of Integral Calculus. 7.4 Properties **UNIT TEST –III** **EAPCET weekly one Class** **Test on EAPCET**	**04** **03** **04** **03** **03** **01** **03** **01**
October 19	7.4 Properties(remaining part) 7.5 Reduction formulae. 7.6 Application of Definite integral to areas. **08. Differential equations:** 8.1 Formation of differential equation-Degree and order of an ordinary differential equation. 8.2 Solving differential equation by a) Variables separable method. **EAPCET weekly one Class** **Test on EAPCET**	**03** **04** **03** **02** **04** **02** **01**
FIRST TERM HOLIDAYS FROM 06-10-2024 TO 13-10-2024		
November 24 (18P)	b) Homogeneous differential equation. c) Non - Homogeneous differential equation. d) Linear differential equations. **03. Parabola:** 3.1 Conic sections –Parabola- equation of parabola in standard form-different forms of parabola-Parametric equations. **EAPCET weekly one Class** **Grand Test on EAPCET**	**03** **03** **03** **06** **02** **01**
HALF YEARLY EXAMINATIONS FROM 18-11-2024 TO 23-11-2024		
December 23	3.2 Equations of tangent and normal at a point on the parabola (Cartesian and Parametric)- conditions for straight line to be a tangent.	**05**

	04. Ellipse: 4.1 Equation of ellipse in standard form- Parametric equations. 4.2 Equation of tangent and normal at a point on the ellipse (Cartesian and parametric)-Condition for a straight line to be a tangent. **05. Hyperbola:** 5.1 Equation of hyperbola in standard form- Parametric equations. **UNIT TEST-IV** **EAPCET weekly one Class** **Test on EAPCET**	**05** **05** **03** **01** **03** **01**
January 22 (16 P)	5.2 Equations of tangent and normal at a point on the hyperbola (Cartesian and parametric)- conditions for a straight line to be a tangent- Asymptotes **EAPCET weekly one Class** **Grand Test on EAPCET** **REVISION**	**03** **03** **01** **09**
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 OF PRACTICAL EXAMS 1STWEEK 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**

Prepared by: **M.VIJAYA SEKHAR,** JL in Maths
Govt. Jr. College, BHEL,Ranga Reddy Dist.