ANNUAL ACADEMIC PLAN 2022-2023

MATHEMATICS-II (A) **II 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 14	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.	**02**
	1.3 Modulus and amplitude of complex numbers –Illustrations.	**03**
	1.4 Geometrical and Polar Representation of complex numbers in Argand plane- Argand diagram.	**04**
	EAMCET class on Complex numbers	**01**
	ASSIGNMENT-I	**01**
July 24	**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**
	EAMCET classes on Complex Numbers and De Movier's Theorem	**02**
	03 Quadratic Expressions:	
	3.1 Quadratic expressions, equations in one variable	**02**
	3.2 Sign of quadratic expressions – Change in signs – Maximum and minimum values	**04**
	3.3 Quadratic inequations	**01**
	EAMCET classes on Quadratic expressions	**01**
	04 Theory of Equations:	
	4.1 The relation between the roots and coefficients in an equation	**03**
	4.2 Solving the equations when two or more roots of it are connected by certain relation	**03**
	ASSIGNMENT-II	**01**
August 22	4.2 Solving the equations when two or more roots of it are connected by certain relation	**02**
	4.3 Equation with real coefficients, occurrence of complex roots in conjugate	**04**

	pairs and its consequences 4.4 Transformation of equations - Reciprocal Equations. **EAMCET** classes on Theory of equations **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 **UNIT TEST -I** **ASSIGNMENT-III**	**06** **02** **03** **03** **01** **01**
September 25	5.3 Permutations when repetitions allowed 5.4 Circular permutations 5.5 Permutations with constraint repetitions 5.6 Combinations-definitions and certain theorems **EAMCET** classes on Permutations &Combinations **06 Binomial Theorem:** 6.1 Binomial theorem for positive integral index **UNIT TEST -II** **ASSIGNMENT -IV**	**03** **03** **02** **06** **01** **08** **01** **01**
DASERA HOLIDAYS FROM 02-10-2022 TO 09-10-2022		
October 19	6.1 Binomial theorem for positive integral index (remaining part) 6.2 Binomial theorem for rational Index (Without proof) 6.3 Approximations using Binomial theorem **EAMCET** classes on binomial theorem **07 Partial fractions:** 7.1 Partial fractions of f(x)/g(x) when g(x) contains non –repeated linear factors. **UNIT TEST -III**	**04** **06** **04** **02** **02** **01**
November 24 (18p)	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 **EAMCET** class on partial fractions **08 MEASURES OF DISPERSION** 8.1 Range 8.2 Mean deviation 8.3 Variance and standard deviation of ungrouped/grouped data. 8.4 Coefficient of variation and analysis of frequency distribution with equal means but	**02** **02** **01** **01** **03** **06** **03**

	different variances.	
HALF YEARLY EXAMINATIONS FROM 21-11-2022 TO 26-11-2022		
December 25	**09 Probability** 9.1 Random experiments and events 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** **ASSIGNMENT-V**	 **05** **05** **06** **04** **03** **01** **01**
January 23	10.2 Theoretical discrete distributions – Binomial and Poisson Distributions **EAMCET c**lasses on Probability and Random variables &Probability Distribution **REVISION**	**03** **02** **18**
PRE-FINAL EXAMINATIONS FROM 06-02-2023 TO 13-02-2023		
February 22 (9 P)	**REVISION**	**9**
PRACTICAL EXAMS IPE-2023 FROM 20-02-2023 TO 06-03-2023		
March 23	**REVISION** LAST WORKING DAY : **31-03-2023**	
THEORY EXAMS IPE-2023 FROM 15-03-2023 TO 04-04-2023		

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