TEACHER'S LESSON PLAN FOR YEAR 2023

Teacher's name	Department	Course	Subjects
Prof.Suruchi Singh	Mathematics	B.A.(Prog.)SemIII	Theory of Equations and Symmetries

SUBJECT NAME	Sub Topics of Units		No. of Lectures
	Unit 1: Polunomial Equations and Properties	**sub topics**	
UNITS	a:General properties of polynomials and equations		1
	b:Fundamental theorem of algebra and its consequences		2
	c: Theorems on imaginary, integral and rational roots		3
	d: Descartes' rule of signs for positive and negative roots		1
	e: Relations between the roots and coefficients of equations		3
	f: Applications to solution of equations when an additional relation among the roots is given		2
	g:De Moivre's theorem for rational indices		2
	h:the nth roots of unity and symmetries of the solutions		4
	Unit 2:Cubic and Biquadratic (Quartic) Equations		
	a:Transformation of equations (multiplication, reciprocal, increase/diminish in the roots by a given quantity)		6
	b:Removal of terms; Cardon's method of solving cubic and Descartes' method of solving biquadratic equations		6
	Unit3:Symmetric Functions		
	a:Elementary symmetric functions and symmetric functions of the roots of an equation		3
	b:Newton's theorem on sums of the like powers of the roots		3
	c:Computation of symmetric functions		3
	d: Descartes' rule of signs for positive and negative roots		3