ANNUAL ACADEMIC PLAN – 2021 – 22
MATHEMATICS – II(B)   SECOND YEAR

S. No.	TOPIC
1	**Chapter-1: Circle** Introduction 1.1 Equation of a circle, standard form, centre and radius 1.2 Position of a point in the plane of a circle Definition of a tangent 1.3 Position of a straight line in the plane of a circle condition for a line to be tangent 1.4 Chord of contact and polar 1.5 Relative Positions of two circles
2	**Chapter-2: System of Circles** Introduction 2.1 Angle between two intersecting circles 2.2 Radical axis of two circles
3	**Chapter-3: Parabola** Introduction 3.1 Conic Sections 3.2 Equation of tangent and normal at a point on the Parabola
4	**Chapter-4: Ellipse** Introduction 4.1 Equation of ellipse in standard form, Parametric equations 4.2 Equation of tangent and normal at a point on the ellipse
5	**Chapter-5: Hyperbola** Introduction 5.1 Equation of hyperbola in standard form Parametric equations 5.2 Equation of Tangent and Normal at a point on the hyperbola
6	**Chapter-6: Integration** Introduction 6.1 Integration as the inverse process of differentiation, standard forms and properties of integrals 6.2 Method of substitution-Integration of algebraic, exponential, logarithmic, trigonometric and inverse trigonometric functions-Integration by parts 6.2(A) Integration by the method of substitution-Integration of algebraic and trigonometric functions

	6.2(B) Integration by parts-Integration of exponential, logarithmic and inverse trigonometric functions 6.3 Integration- Partial fractions method 6.4 Reduction formulae	
7	**Chapter-7: Definite Integrals** Introduction 7.1 Define Integral as the limit of sum 7.2 Interpretation of definite integral as an area 7.3 The Fundamental Theorem of Integral Calculus 7.4 Properties 7.5 Reduction Formulae 7.6 Applications of definite integral to areas	
8	**Chapter-8: Differential Equation** Introduction 8.1 Formation of differential equations-Degree and order of an ordinary differential Equation 8.2 Solving Differential Equations 8.2 (a) Variables separable method 8.2(b) Homogenous Differential Equation 8.2(c) Non-Homogeneous Different Equations 8.2(d) Linear Differential Equations	
9	Reference Books Syllabus Model Question Paper	