



**SRI Y.N.COLLEGE(Autonomous), Narasapur**  
**Affiliated to Adikavi Nannayya University**  
**DEPARTMENT OF MATHEMATICS CURRICULAR PLAN 2022-23**  
**I B.Sc Paper-I, - Differential equations - Semester –I**  
**(Dr GSVS Saibaba, P Bhagya Sri, ASL Bhavani)**

S.No	Month	Week	Syllabus	Additional input/ Value addition	Curricular Activity		Co-Curricular Activity	
					Activity	Hours Alloted	Activity	Hours Alloted
1.	Oct	II <sup>nd</sup> week	Bridge course: Fundamentals in Intermediate	Basics Useful formulas	Teaching	18	Assignment	1
		III <sup>rd</sup> week	Variable Separable and Homogeneous Differential Equations, Exact Differential Equations					
		IV <sup>th</sup> week	Integrating factors					
2.	Nov	I <sup>st</sup> week	Integrating factors	Additional Problems Downloaded Material	Teaching	24	Assignment Slip test Seminar	1 1 1
		II <sup>nd</sup> week	Linear Differential Equations					
		III <sup>rd</sup> week	Bernoulli's Differential Equations					
		IV <sup>th</sup> week	Orthogonal trajectories					
3.	Dec	I <sup>st</sup> week	Differential equations solvable for p, y	Additional Problems Downloaded Material	Teaching	24	Prof.Srinivasa Ramanujan birthday Celebrations	
		II <sup>nd</sup> week	Differential equations solvable for y, x					
		III <sup>rd</sup> week	Differential equations of the first degree in x					
		IV <sup>th</sup> week	General Solution of $f(D)y=0$ and $f(D)y=Q$ , P.I of $f(D)y=Q$ when $Q=be^{ax}$ and $\sin bx$ or $\cos bx$					
4.	Jan	I <sup>st</sup> week	P.I of $f(D)y=Q$ when $Q=bx^k$ and $e^{ax}V$	Difficult Examples Downloaded Material	Teaching	24	Slip test Assignments Seminar	1 1 1
		II <sup>nd</sup> week	P.I of $f(D)y=Q$ when $Q=xV$ and $x^mV$					
		III <sup>rd</sup> week	By inspection, Method of variation of parameters					
		IV <sup>th</sup> week	Cauchy Euler Equation, Legendre's equation					



**SRI Y.N.COLLEGE(Autonomous),Narsapur**  
**Affiliated to Adikavi Nannayya University**  
**DEPARTMENT OF MATHEMATICS CURRICULAR PLAN 2022-23**  
**I B.Sc Paper-II - Solid Geometry - Semester –II**  
**(Ch Venkatesh Gowd, P Bhagya Sri, A S L Bhavani)**

S.No	Month	Week	Syllabus	Additional input/ Value addition	Curricular Activity		Co-Curricular Activity	
					Activity	Hours Alloted	Activity	Hours Alloted
1.	Mar	IV <sup>th</sup> Week	Introduction	Basics	Teaching	06		
2.	April	I <sup>st</sup> Week	The Plane	Examples Downloaded Materials	Teaching	24	Slip test Assignments Seminars	1 1 1
		II <sup>nd</sup> Week	The Plane					
		III <sup>rd</sup> Week	The Plane					
		IV <sup>th</sup> Week	The Straight Line					
3.	May	I <sup>st</sup> Week	The Straight Line	Additional Problems Downloaded Material	Teaching	12	Slip test Assignments	1 1
		II <sup>nd</sup> Week	The Straight Line					
4	June	III <sup>rd</sup> Week	The Sphere	Additional Problems Downloaded	Teaching	12	Slip test Assignments	1 1
		IV <sup>th</sup> Week	The Sphere					
5.	July	I <sup>st</sup> week	The Sphere	Examples Downloaded Materials	Teaching	24	Slip test Assignments Seminars	1 1 1
		II <sup>nd</sup> week	The Cone					
		III <sup>rd</sup> week	The Cone					
		IV <sup>th</sup> week	The Cone					



**SRI Y.N.COLLEGE(Autonomous), Narsapur**  
**Affiliated to Adikavi Nannayya University**

**DEPARTMENT OF MATHEMATICS CURRICULAR PLAN 2022 – 23**

**II B.Sc Paper-III - Group Theory - Semester –III**

**( Dr GSVS Saibaba, Ch Bala Raju, PK Parameswari, Ch Venkatesh Gowd, P Bhagya Sri)**

S.No	Month	Week	Syllabus	Additional input / Value addition	Curricular Activity		Co-Curricular Activity	
					Activity	Hours Alloted	Activity	Hours Alloted
1.	Oct	II <sup>nd</sup> Week	Number system, Binary Operations	Useful results	Teaching	18	Slip test Assignments	1 1
		III <sup>rd</sup> Week	Functions , Groups, properties					
		IV <sup>th</sup> Week	Finite and Infinite groups-examples					
2.	Nov	I <sup>st</sup> Week	Order of a group	Additional Problems Downloaded Material	Teaching	24	Slip test Assignments Seminars	1 1 1
		II <sup>nd</sup> Week	Composition tables with examples					
		III <sup>rd</sup> Week	Sub Groups					
		IV <sup>th</sup> Week	Cosets and Lagrange's theorem					
3.	Dec	I <sup>st</sup> Week	Normal Subgroups, Quotient groups	Difficult Examples Down Loaded Material	Teaching	24	Prof.Srinivasa Ramanujan birthday Celebrations	
		II <sup>nd</sup> Week	Homomorphism & Isomorphism of groups					
		III <sup>rd</sup> Week	Permutation of groups					
		IV <sup>th</sup> Week	Cyclic groups					
4.	Jan	I <sup>st</sup> Week	Cyclic groups	Additional Problems Downloaded Material	Teaching	24	Slip test Assignments Seminars	1 1 1
		II <sup>nd</sup> Week	Def of Ring and Basic Properties					
		III <sup>rd</sup> Week	Boolean rings , Integral Domain					
		IV <sup>th</sup> Week	Sub Rings, Ideals					



**SRI Y.N.COLLEGE(Autonomous),Narsapur**  
**Affiliated to Adikavi Nannayya University**  
**DEPARTMENT OF MATHEMATICS CURRICULAR PLAN 2022-23**  
**II B.Sc Paper-IV - Real Analysis - Semester –IV**  
**(Dr GSVS Saibaba, S Kusuma, Ch Venkatesh Gowd, P Bhagya Sri)**

S.No	Month	Week	Syllabus	Additional input/ Value addition	Curricular Activity		Co-Curricular Activity	
					Activity	Hours Alloted	Activity	Hours Alloted
1.	Mar	IV <sup>th</sup> Week	Real Numbers	Basics	Teaching	06		
2.	Apr	I <sup>st</sup> Week	Sequences	Examples Downloaded Materials	Teaching	24	Slip test Assignments Seminars	1 1 1
		II <sup>nd</sup> Week	Sequences					
		III <sup>rd</sup> Week	Infinite Series					
		IV <sup>th</sup> Week	Infinite Series					
3.	May	I <sup>st</sup> Week	Limits	Additional Problems	Teaching	12	Slip test Assignments	1 1
		II <sup>nd</sup> Week	Continuous functions					
4.	June	I <sup>st</sup> Week	Differentiation	Additional Problems Downloaded Material	Teaching	24	Slip test Assignments Seminars	1 1 1
		II <sup>nd</sup> Week	Differentiation					
		III <sup>rd</sup> Week	Mean value theorems					
		IV <sup>th</sup> Week	Mean value theorems					
5.	July	I <sup>st</sup> Week	Generalized mean value theorems	Additional Problems Downloaded Material	Teaching	24	Slip test Assignments Seminars	1 1 1
		II <sup>nd</sup> Week	Riemann Integration					
		III <sup>rd</sup> Week	Riemann Integration					
		IV <sup>th</sup> Week	Riemann Integration					



**SRI Y.N.COLLEGE(Autonomous),Narsapur**  
**Affiliated to Adikavi Nannayya University**  
**DEPARTMENT OF MATHEMATICS CURRICULAR PLAN 2022 - 23**  
**II B.Sc Paper-V - Linear Algebra - Semester –IV**  
**( PK Parameswari, Ch Bala Raju, P Bhagya Sri, ASL Bhavani)**

S.No	Month	Week	Syllabus	Additional input/ Value addition	Curricular Activity		Co-Curricular Activity	
					Activity	Hours Alloted	Activity	Hours Alloted
1.	Mar	IV <sup>th</sup> week	Vector spaces, properties	Additional Problems	Teaching	06	Assignments	1
2	April	I <sup>st</sup> Week	Sub spaces, characterization of Subspaces	Additional Problems Downloaded Material	Teaching	24	Slip test Assignments Seminars	1 1 1
		II <sup>nd</sup> week	Linear combination, Linearly independent and Dependent of vectors					
		III <sup>rd</sup> week	Direct sum of two Subspaces of vector space					
		IV <sup>th</sup> week	Basis and dimension Vector space, Theorems on finite dimensional Vector space					
3	May	I <sup>st</sup> week	Quotient space, Dimension of Quotient space.	Additional Problems	Teaching	12	Slip test Assignments	1 1
		II <sup>nd</sup> week	Linear transformation, Rank and nullity of Linear transformation					
4	June	III <sup>rd</sup> week	Matrix	Additional Problems	Teaching	12	Slip test Assignments	1 1
		IV <sup>th</sup> week	Matrix					
5	July	I <sup>st</sup> week	Inner product spaces, Norm of a vector space	Additional Problems Downloaded Material	Teaching	24	Slip test Assignments Seminars	1 1 1
		II <sup>nd</sup> week	Inner product spaces, Norm of a vector space					
		III <sup>rd</sup> week	The Gram-Schmidt orthogonalisation process					
		IV <sup>th</sup> week	The Gram-Schmidt orthogonalisation process					



**SRI Y.N.COLLEGE(Autonomous),Narsapur**  
**Affiliated to Adikavi Nannayya University**  
**DEPARTMENT OF MATHEMATICS CURRICULAR PLAN 2022-23**  
**III B.Sc Paper-VI - Numerical Methods - Semester –V**  
**( Dr GSVS Saibaba, PK Parameswari, S Kusuma, P.Bhagya Sri)**

S.No	Month	Week	Syllabus	Additional input/ Value addition	Curricular Activity		Co-Curricular Activity	
					Activity	Hours Alloted	Activity	Hours Alloted
1.	Oct	II <sup>nd</sup> Week	Errors in Numerical computations, Introduction	Useful results	Teaching	18	Assignments	1
		III <sup>rd</sup> week	Backward differences Central Differences,					
		IV <sup>th</sup> week	nth Differences of Some functions, Advancing Difference formula					
2.	Nov	I <sup>st</sup> week	Differences of Factorial Polynomial, Summation of Series. Newton's formulae for interpolation, Central Difference Interpolation Formulae	Additional Problems Downloaded Material	Teaching	24	Slip test Assignments Seminars	1 1 1
		II <sup>nd</sup> week	Gauss's Forward interpolation formulae, Gauss's backward interpolation formulae					
		III <sup>rd</sup> week	Stirling's formula, Bessel's formula					
		IV <sup>th</sup> week	Divided differences and properties, Newton's divided differences formula, Lagrange's interpolation formula					
3.	Dec	I <sup>st</sup> week	Lagrange's Inverse interpolation formula, Derivatives using Newton's forward difference formula, Newton's back ward difference formula	Difficult Examples	Teaching	24	Prof.Srinivasa Ramanujan birthday Celebrations	
		II <sup>nd</sup> week	Derivatives using central difference formula, Stirling's interpolation formula,					
		III <sup>rd</sup> week	Newton's divided difference formula, Maximum and minimum values of a tabulated function.					
		IV <sup>th</sup> week	General quadrature formula one errors, Trapezoidal, Simpson's 1/3, Simpson's 3/8 and Weddle's rules,					
4	Jan	I <sup>st</sup> week	Euler – McLaurin Formula of summation and quadrature, The Euler transformation.	Difficult Examples Material	Teaching	24	Slip test Assignments Seminars	1 1 1
		II <sup>nd</sup> week	Solution by Taylor's Series, Picard's method of successive approximations,					
		III <sup>rd</sup> week	Euler's method, Modified Euler's method					
		IV <sup>th</sup> week	Runge – Kutta methods.					



**SRI Y.N.COLLEGE(Autonomous),Narsapur**  
**Affiliated to Adikavi Nannayya University**  
**DEPARTMENT OF MATHEMATICS CURRICULAR PLAN 2022-23**  
**III B.Sc Paper-VII - Special Functions - Semester –V**  
**( Ch Bala Raju, PK Parameswari , Ch Venkatesh Gowd, ASL Bhavani)**

S.No	Month	Week	Syllabus	Additional input/ Value addition	Curricular Activity		Co-Curricular Activity	
					Activity	Hours Alloted	Activity	Hours Alloted
1.	Oct	II <sup>nd</sup> Week	Euler's Integrals- Beta and Gamma functions, Elementary properties of functions, Transformation of Gamma functions	Additional Problems	Teaching	18	Slip test Assignments Seminars	1 1 1
		III <sup>rd</sup> week	Another form of Beta function, Relation between Beta and Gamma Functions, Chebyshev Polynomials					
		IV <sup>th</sup> week	Orthogonal properties, Recurrence relations, generating functions for Chebyshev polynomials.					
2.	Nov	I <sup>st</sup> week	Introduction, summary of useful results, power series, radius of convergence, theorems on Power series,	Additional Problems Downloaded Material	Teaching	24	Slip test Assignments Seminars	1 1 1
		II <sup>nd</sup> week	Ordinary and singular points, regular and irregular singular points, power series solution					
		III <sup>rd</sup> week	Power series solution					
		IV <sup>th</sup> week	Power series solution					
3.	Dec	I <sup>st</sup> week	Solution of Hermite Equation, Generating function, Other forms of Hermite Polynomial,	Additional Problems Downloaded Material	Teaching	24	Prof.Srinivasa Ramanujan birthday Celebrations	
		II <sup>nd</sup> week	First few Hermite Polynomials, Orthogonal properties and Recurrence formulae for Hermite Polynomials					
		III <sup>rd</sup> week	Definition, Solution of Legendre's equation, Defintion of $P_n(x)$ & $Q_n(x)$ , General sol of Legendre's eqn					
		IV <sup>th</sup> week	$P_n(x)$ is the co efficient of $h^n$ . Orthogonal properties of Legendre's eqn, Recurrence formulae,					
4	Jan	I <sup>st</sup> week	Rodrigue's formula, Def, solution of Bessel's general Differential equation	Additional Problems Downloaded Material	Teaching	24	Slip test Assignments Seminars	1 1 1
		II <sup>nd</sup> week	General Solution of Bessel's equation, Integration of Bessel's equation in series for $n=0$					
		III <sup>rd</sup> week	Defintion of $J_n(x)$ , Recurrence formulae for $J_n(x)$ , Generating function for $J_n(x)$					
		IV <sup>th</sup> week	Orthogonality of Bessel functions.					