



**SRI Y.N.COLLEGE(Autonomous),Narasapur**  
**Affiliated to Adikavi Nannayya University**  
**Accredited by NAAC with 'A' Grade with CGPA of 3.40**  
**Recognized by UGC as 'College with potential for Excellence'**  
**DEPARTMENT OF MATHEMATICS CURRICULAR PLAN 2017-18**  
**I B.Sc Paper-I, Semester -I**  
**(Differential equations )**

S.No	Month	Week	Syllabus	Additional input/ Value addition	Curricular Activity		Co-Curricular Activity	
					Activity	Hours Alloted	Activity	Hours Alloted
1.	June	I <sup>st</sup> week	Bridge course: Fundamentals in Intermediate	Basics Useful formulas	Teaching	08	Assignment	1
		II <sup>nd</sup> week	Exact Differential Equations					
2.	July	I <sup>st</sup> week	Integrating factors	Additional Problems Downloaded Material	Teaching	24	Slip test Assignments	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.	Aug	I <sup>st</sup> week	Differential equations solvable for p,y	Difficult Examples Downloaded Material	Teaching	24	Slip test Assignments Guest lecture	1 1 1
		II <sup>nd</sup> week	Differential equations solvable for y,x					
		III <sup>rd</sup> week	Differential equations of the first degree in x and y, Clairaut's equation					
		IV <sup>th</sup> week	General Solution of $f(D)y=0$ and $f(D)y=Q$ , when Q is a function of x					
4.	Sep	I <sup>st</sup> week	P.I of $f(D)y=Q$ when $Q=be^{ax}$ and $\sin bx$ or $\cos bx$	Counter Examples Downloaded Material	Teaching	24	Slip test Assignments	1 1
		II <sup>nd</sup> week	P.I of $f(D)y=Q$ when $Q=bx^k$ and $e^{ax}V$					
		III <sup>rd</sup> week	P.I of $f(D)y=Q$ when $Q=xV$ and $x^mV$					
		IV <sup>th</sup> week	Method of variation of parameters					
5.	Oct	I <sup>st</sup> week	Cauchy Euler Equation	Additional Problems	Teaching	10	Slip test Assignments	1 1
		II <sup>nd</sup> week	Revision					



**SRI Y.N.COLLEGE(Autonomous),Narsapur**  
**Affiliated to Adikavi Nannayya University**  
**Accredited by NAAC with 'A' Grade with CGPA of 3.40**  
**Recognized by UGC as 'College with potential for Excellence'**  
**DEPARTMENT OF MATHEMATICS CURRICULAR PLAN 2017-18**  
**I B.Sc Paper-II, Semester –II**  
**( Solid Geometry )**

S.No	Month	Week	Syllabus	Additional input/ Value addition	Curricular Activity		Co-Curricular Activity	
					Activity	Hours Alloted	Activity	Hours Alloted
1.	Nov	III <sup>rd</sup> week	Introduction to coordinate axes		Teaching	10	Assignment	1
		IV <sup>th</sup> week	The Plane					
2.	Dec	I <sup>st</sup> week	The plane	Examples Downloaded Materials	Teaching	24	Slip test Assignments Quiz Seminars Prof.Srinivasa Ramanujan birthday Celebrations	1 1 1 1
		II <sup>nd</sup> week	The plane					
		III <sup>rd</sup> week	The Straight Line					
		IV <sup>th</sup> week	The Straight Line					
3.	Jan	I <sup>st</sup> week	The Straight Line	Additional Problems Downloaded Material	Teaching	14	Slip test Assignments	1 1
		II <sup>nd</sup> week	The Sphere					
		III <sup>rd</sup> week	The Sphere					
		IV <sup>th</sup> week	The Sphere					
4.	Feb	I <sup>st</sup> week	The Sphere	Difficult Examples	Teaching	24	Slip test Assignments	1 1
		II <sup>nd</sup> week	The Cone					
		III <sup>rd</sup> week	The Cone					
		IV <sup>th</sup> week	The Cone					
5.	March	I <sup>st</sup> week	Revision	Counter Examples	Teaching	06	Slip test Assignments	1 1



**SRI Y.N.COLLEGE(Autonomous),Narsapur**  
**Affiliated to Adikavi Nannayya University**  
**Accredited by NAAC with 'A' Grade with CGPA of 3.40**  
**Recognized by UGC as 'College with potential for Excellence'**  
**DEPARTMENT OF MATHEMATICS CURRICULAR PLAN 2017-18**  
**II B.Sc Paper-III, Semester –III**  
**(Group Theory)**

S.No	Month	Week	Syllabus	Additional input/ Value addition	Curricular Activity		Co-Curricular Activity	
					Activity	Hours Alloted	Activity	Hours Alloted
1.	June	I <sup>st</sup> week	Number system, Binary Operations	Useful results	Teaching	10	Assignment	1
		II <sup>nd</sup> week	Groups, properties					
2.	July	I <sup>st</sup> week	Finite and Infinite groups-examples	Additional Problems Downloaded Material	Teaching	24	Slip test Assignments	1 1
		II <sup>nd</sup> week	Order of a group					
		III <sup>rd</sup> week	Composition tables with examples					
		IV <sup>th</sup> week	Sub Groups					
3.	Aug	I <sup>st</sup> week	Sub Groups ,Cosets and Lagrange's theorem	Difficult Examples Down Loaded Material	Teaching	24	Slip test Assignments Guest lecture	1 1 1
		II <sup>nd</sup> week	Normal Subgroups					
		III <sup>rd</sup> week	Normal subgroups					
		IV <sup>th</sup> week	Quotient groups					
4.	Sep	I <sup>st</sup> week	Homomorphism of groups	Additional Problems Downloaded Material	Teaching	24	Slip test Assignments	1 1
		II <sup>nd</sup> week	Isomorphism of groups					
		III <sup>rd</sup> week	Permutation of groups					
		IV <sup>th</sup> week	Permutation of groups, Cyclic groups					
5.	Oct	I <sup>st</sup> week	Cyclic groups	Additional Problems Downloaded Material	Teaching	10	Slip test Assignments	1 1
		II <sup>nd</sup> week	Revision					



**SRI Y.N.COLLEGE(Autonomous),Narsapur**  
**Affiliated to Adikavi Nannayya University**  
**Accredited by NAAC with ‘A’ Grade with CGPA of 3.40**  
**Recognized by UGC as ‘College with potential for Excellence’**  
**DEPARTMENT OF MATHEMATICS CURRICULAR PLAN 2017-18**  
**II B.Sc Paper-IV, Semester –IV**  
**(Real Analysis)**

S.No	Month	Week	Syllabus	Additional input/ Value addition	Curricular Activity		Co-Curricular Activity	
					Activity	Hours Alloted	Activity	Hours Alloted
1.	Nov	I <sup>st</sup> Week	Real Numbers	Downloaded Material Additional Problems	Teaching	10	Slip test	1
		II <sup>nd</sup> Week	Real Sequences				Assignments Seminars	1 2
2.	Dec	I <sup>st</sup> week	Real Sequences	Examples Downloaded Materials	Teaching	32	Slip test	1
		II <sup>nd</sup> week	Infinite Series				Assignments	1
		III <sup>rd</sup> week	Infinite Series				Quiz	1
		IV <sup>th</sup> week	Limits				Prof.Srinivasa Ramanujan birthday Celebrations	
3.	Jan	I <sup>st</sup> week	Continuous functions	Additional Problems Downloaded Material	Teaching	32	Slip test	1
		II <sup>nd</sup> week	Continuous functions				Assignments	1
		III <sup>rd</sup> week	Differentiation					
		IV <sup>th</sup> week	Mean value theorems					
4.	Feb	I <sup>st</sup> week	Mean value theorems	Difficult Examples	Teaching	32	Slip test	1
		II <sup>nd</sup> week	Generalized mean value theorems				Assignments	1
		III <sup>rd</sup> week	Riemann Integration					
		IV <sup>th</sup> week	Riemann Integration					
5.	March	I <sup>st</sup> week	Revision	Downloaded Material Additional Problems	Teaching	10	Slip test Assignments	1 1



**SRI Y.N.COLLEGE(Autonomous),Narsapur**  
**Affiliated to Adikavi Nannayya University**  
**Accredited by NAAC with 'A' Grade with CGPA of 3.40**  
**Recognized by UGC as 'College with potential for Excellence'**  
**DEPARTMENT OF MATHEMATICS CURRICULAR PLAN 2017-18**  
**III B.Sc Paper-V, Semester –V**  
**(Ring Theory & Vector Calculus)**

S.No	Month	Week	Syllabus	Additional input/ Value addition	Curricular Activity		Co-Curricular Activity	
					Activity	Hours Alloted	Activity	Hours Alloted
1.	Jun	I <sup>st</sup> Week	Def of Ring and Basic Properties	Downloaded material Additional Problems	Teaching	10	Assignments	1
		II <sup>nd</sup> Week	Boolean rings, Divisors of Zero and Cancellation of laws,					
2.	Jul	I <sup>st</sup> week	Integral Domain, Division Ring and Fields	Additional Problems Downloaded Material	Teaching	24	Slip test Assignments Quiz Prof.Srinivasa Ramanujan birthday Celebrations	1 1 1
		II <sup>nd</sup> week	Sub Rings, Ideals					
		III <sup>rd</sup> week	Homomorphism, Properties of Homomorphism					
		IV <sup>th</sup> week	Maximal and Prime ideals					
3.	Aug	I <sup>st</sup> week	Vector differentiation, ordinary derivatives of vectors	Additional Problems Downloaded Material	Teaching	24	Slip test Assignments	1 1
		II <sup>nd</sup> week	Space curves, continuity, differentiation					
		III <sup>rd</sup> week	Gradient, divergence					
		IV <sup>th</sup> week	curl operators, formulae involving these operators.					
4.	Sep	I <sup>st</sup> week	Vector integration: Theorem on Gauss & problems	Additional Problems Downloaded Material	Teaching	24	Slip test Assignments Project works	1 1
		II <sup>nd</sup> week	Green's theorem and problems					
		III <sup>rd</sup> week	Stocke's theorem and problems					
		IV <sup>th</sup> week	Applications of Gauss, Green's and Stocke's theorems					
5.	Oct	I <sup>st</sup> week	Applicaitons on Gauss, Green's and Stocke's theorems	Counter Examples	Teaching	06	Slip test Assignments	1 1
		II week	Revision					



**SRI Y.N.COLLEGE(Autonomous),Narsapur**  
**Affiliated to Adikavi Nannayya University**  
**Accredited by NAAC with 'A' Grade with CGPA of 3.40**  
**Recognized by UGC as 'College with potential for Excellence'**  
**DEPARTMENT OF MATHEMATICS CURRICULAR PLAN 2017-18**  
**III B.Sc Paper-VI, Semester –V**  
**(Linear Algebra)**

S.No	Month	Week	Syllabus	Additional input/ Value addition	Curricular Activity		Co-Curricular Activity	
					Activity	Hours Alloted	Activity	Hours Alloted
1.	June	I <sup>st</sup> week	Vector spaces, properties	Useful results	Teaching	10	Assignments	1
		II <sup>nd</sup> week	Sub spaces, characterization of Subspaces					
2.	July	I <sup>st</sup> week	Linear combination, Linearly independent and Dependent of vectors	Additional Problems Downloaded Material	Teaching	24	Slip test	1
		II <sup>nd</sup> week	Direct sum of two Subspaces of vector space					
		III <sup>rd</sup> week	Basis and dimension Vector space, Theorems on finite dimensional					
		IV <sup>th</sup> week	Quotient space, Dimension of Quotient space.					
3.	Aug	I <sup>st</sup> week	Inner product spaces, Norm	Difficult Examples Down Loaded Material	Teaching	24	Slip test Assignments Guest Lecture	1 1 1
		II <sup>nd</sup> week	The Gram-Schmidt orthogonalisation process,					
		III <sup>rd</sup> week	Orthogonal complements					
		IV <sup>th</sup> week	Adjoint operators					
4.	Sep	I <sup>st</sup> week	Linear transformation	Additional Problems Downloaded Material	Teaching	24	Slip test Assignments	1 1
		II <sup>nd</sup> week	Rank and nullity of Linear transformation					
		III <sup>rd</sup> week	Isomorphism, Null space, Dimensions, problems					
		IV <sup>th</sup> week	Matrices, Elementary matrix operations					
5.	Oct	I <sup>st</sup> week	Sylvester's law of nullity, Characteristic values and vectors	Additional Problems Downloaded Material	Teaching	1	Slip test Assignments	1 1
		II <sup>nd</sup> week	System of linear equations, Determinants, Diagonalisation					



**SRI Y.N.COLLEGE(Autonomous),Narsapur**  
**Affiliated to Adikavi Nannayya University**  
**Accredited by NAAC with 'A' Grade with CGPA of 3.40**  
**Recognized by UGC as 'College with potential for Excellence'**  
**DEPARTMENT OF MATHEMATICS CURRICULAR PLAN 2017-18**  
**III B.Sc Paper-VIIB, Semester –VI**  
**(Numerical Analysis)**

S.No	Month	Week	Syllabus	Additional input/ Value addition	Curricular Activity		Co-Curricular Activity	
					Activity	Hours Alloted	Activity	Hours Alloted
1.	Nov	I <sup>st</sup> week	Errors in Numerical computation, Numbers and their accuracy, errors and their computation	Useful results	Teaching	10	Assignment	1
		II <sup>nd</sup> week	Absolute, relative, percentage errors, a general error formulae, error in a series approximation					
2.	Dec	I <sup>st</sup> week	Solution of algebraic and transcendental equation, The Bisection method	Additional Problems Downloaded Material	Teaching	24	Slip test	1
		II <sup>nd</sup> week	Iterative method, the method of Regula -Falsi,					
		III <sup>rd</sup> week	Newton-Raphson method, Generalized Newton-Raphson method					
		IV <sup>th</sup> week	Ramanujan's method, Muller's method.					
3.	Jan	I <sup>st</sup> week	Interpolation, Errors in polynomial interpolation	Difficult Examples	Teaching	24	Slip test Guest Lecture	1 1
		II <sup>nd</sup> week	Newton forward difference formula, Backward difference formula					
		III <sup>rd</sup> week	Central difference formula, Gauss forward and backward formulae's					
		IV <sup>th</sup> week	Strilling's formula, Problems on finite differences					
4.	Feb	I <sup>st</sup> week	Divided differences	Additional Problems	Teaching	24	Slip test	1
		II <sup>nd</sup> week	Newton divided difference formula					
		III <sup>rd</sup> week	Lagrange's interpolation formula					
		IV <sup>th</sup> week	Lagrange's interpolation formula					
5.	Mar	I <sup>st</sup> week	Error's in Lagranges formulae, Derivation of Governing equations	Additional Problems	Teaching	6	Slip test	1





**SRI Y.N.COLLEGE(Autonomous),Narsapur**  
**Affiliated to Adikavi Nannayya University**  
**Accredited by NAAC with ‘A’ Grade with CGPA of 3.40**  
**Recognized by UGC as ‘College with potential for Excellence’**  
**DEPARTMENT OF MATHEMATICS CURRICULAR PLAN 2017-18**  
**III B.Sc Paper-VIIIB-1, Semester –VI**  
**(Advanced Numerical Analysis)**

S.No	Month	Week	Syllabus	Additional input/ Value addition	Curricular Activity		Co-Curricular Activity	
					Activity	Hours Alloted	Activity	Hours Alloted
1.	Nov	I <sup>st</sup> Week	Curve fitting: Least square methods, fitting a Straight line non linear curve fitting	Additional Problems	Teaching	10	Assignments	1
		II <sup>nd</sup> Week	Curve fitting by sum of exponentials					
2.	Dec	I <sup>st</sup> week	Numerical differentiation and Numerical Integration	Additional Problems Downloaded Material	Teaching	24	Assignments Quiz Prof.Srinivasa Ramanujan birthday Celebrations	2 1
		II <sup>nd</sup> week	Errors in numerical differentiation					
		III <sup>rd</sup> week	Max and min values of tabulated functions Simpson's $\frac{1}{3}$ <sup>rd</sup> rule and $\frac{3}{8}$ <sup>th</sup> rules					
		IV <sup>th</sup> week	Trapezoidal rule, Weddle's rule, Boole's rule.					
3.	Jan	I <sup>st</sup> week	Linear system of equations, solution of linear System	Additional Problems Downloaded Material	Teaching	24	Slip test Assignment	1 1
		II <sup>nd</sup> week	Direct methods, matrix inversion method					
		III <sup>rd</sup> week	Gaussian elimination method, method of Factorization, III-conditioned linear system					
		IV <sup>th</sup> week	Iterative method, Jacobi's method, Gauss-seidal method.					
4.	Feb	I <sup>st</sup> week	Differential equations in numerical analysis	Additional Problems Downloaded Material	Teaching	24	Slip test Assignment Project works	1 1
		II <sup>nd</sup> week	Taylor's series, Euler's, Modified Euler's					
		III <sup>rd</sup> week	Picard's method					
		IV <sup>th</sup> week	Runge-Kutta methods					
5.	March	I <sup>st</sup> week	Revision	Counter Examples	Teaching	6	Slip test Assignment	1 1





**SRI Y.N.COLLEGE(Autonomous),Narsapur**  
**Affiliated to Adikavi Nannayya University**  
**Accredited by NAAC with 'A' Grade with CGPA of 3.40**  
**Recognized by UGC as 'College with potential for Excellence'**  
**DEPARTMENT OF MATHEMATICS CURRICULAR PLAN 2017-18**  
**III B.Sc Paper-VIIB-2, Semester –VI**  
**(Special Functions)**

S.No	Month	Week	Syllabus	Additional input/ Value addition	Curricular Activity		Co-Curricular Activity	
					Activity	Hours Alloted	Activity	Hours Alloted
1.	Nov	I <sup>st</sup> Week	Hermite Differential Equation, Solution of Hermite Equation	Additional Problems	Teaching	10	Assignments	1
		II <sup>nd</sup> Week	Generating function, Other forms of Hermite Polynomial					
2.	Dec	I <sup>st</sup> week	First few Hermite Polynomials, Orthogonal properties of Hermite Polynomials	Additional Problems Downloaded Material	Teaching	24	Assignments Quiz Prof.Srinivasa Ramanujan birthday Celebrations	2 1
		II <sup>nd</sup> week	Recurrence formulae for Hermite Polynomials					
		III <sup>rd</sup> week	Laguerre's Differential Equation, Solution of Laguerre's Polynomials,					
		IV <sup>th</sup> week	First few Laguerre Polynomials, Orthogonal property of the Laguerre Polynomials, Recurrence formulae					
3.	Jan	I <sup>st</sup> week	Definition, Solution of Legendre's equation, Defintion of $P_n(x)$ & $Q_n(x)$	Additional Problems Downloaded Material	Teaching	24	Slip test Assignment	1 1
		II <sup>nd</sup> week	General sol of Legendre's eqn $P_n(x)$ is the co efficient of $h^n$ . Orthogonal properties of Legendre's eqn					
		III <sup>rd</sup> week	Recurrence formulae, Rodrigue's formula.					
		IV <sup>th</sup> week	Def, solution of Bessel's general Differential equation General Solution of Bessel's equation,					
4.	Feb	I <sup>st</sup> week	Integration of Bessel's equation in series for $n=0$ , Defintion of $J_n(x)$ , Recurrence formulae for $J_n(x)$	Additional Problems Downloaded Material	Teaching	24	Slip test Assignment Project works	1 1
		II <sup>nd</sup> week	Generating function for $J_n(x)$ , Euler's Integrals- Beta and Gamma functions, Elementary properties of functions					
		III <sup>rd</sup> week	Transformation of Gamma functions, Another form of Beta function					
		IV <sup>th</sup> week	Relation between Beta and Gamma Functions, Other Transformation					
5.	March	I <sup>st</sup> week	Revision	Counter examples	Teaching	6	Slip test	1