#### (Accredited by the NAAC at "B" Level)

#### ANNEXURE - I

### CURRICULAR PLAN (ODD SEM) -- LECTURER WISE(2022-23)

TITLE OF THE PAPER: Multiple Integration and Applications of Vector Calculus

Name of the Lecturer: Dr. CH. Srimannarayana

CLASS: III <u>BSc</u>

Sem: <u>5</u>

SUBJECT: MATHEMATICS

PAPER : <u>6</u>B

S.NO	MONTH	HOURS AVAILABLE	SYLLABUS TOPIC	ADDITIONAL INPUT/VALUE		CURRICU	LAR ACTIVI	TY	CO-	CURRICULAR	ACTIVITY		REMARKS
				ADDITION	Activity	Hours allotted	Whether conducted	If not alternate date	Activity	Hours allotted	Whether conducted	if not alternate date	
1	NOV'22(14- 19)	6	Unit-1: Multiple integrals-I 1. Introduction, Double integrals, Evaluation of double integrals,	Properties of Integrals	Teaching	6			Assignment	3			
	NOV'22(21- 26)	6	Properties of double integrals. 2. Region of integration, double integration in Polar Co-ordinates,	Properties of Integrals	Teaching	6							
	NOV'22(28- 30)	3	3. Change of variables in double integrals, change of order of integration.	Properties of Integrals	Teaching	2			MID	1			

(Accredited by the NAAC at "B" Level)

#### ANNEXURE - I

### CURRICULAR PLAN (ODD SEM) -- LECTURER WISE(2022-23)

TITLE OF THE PAPER: Multiple Integration and Applications of Vector Calculus

Name of the Lecturer: Dr. CH. Srimannarayana

CLASS: III <u>BSc</u>

Sem: <u>5</u>

SUBJECT: MATHEMATICS

PAPER : **6B** 

S.NO	MONTH	HOURS AVAILABLE	SYLLABUS TOPIC	ADDITIONAL INPUT/VALUE		CURRICU	JLAR ACTIVI	ТҮ	CO	-CURRICULAF	R ACTIVITY		REMARKS
		AVAILABLE		ADDITION	Activity	Hours allotted	Whether conducted	If not alternate date	Activity	Hours allotted	Whether conducted	if not alternate date	
2	DEC'22 (01-09)	8	Unit-2: Multiple integrals-II 1. Triple integral, region of integration, change of variables. 2. Plane areas by double integrals, surface area by double integral.	Properties of Vectors	Teaching	4			MID	1			
	DEC'22 (12-17)	6	3. Volume as a double integral, volume as a triple integral.	Properties of Vectors	Teaching	4			Clean & Green	1			
	DEC'22 (19-23)	5	Unit-3: Vector differentiation 1. Vector differentiation, ordinary derivatives of vectors. 2. Differentiability, Gradient, Divergence, Curl operators,	Properties of Vectors	Teaching	4			Assignment	2			
	DEC'22 (27- 031)	5	3. Formulae involving the separators.	Properties of Vectors	Teaching	4			Quiz	1			

(Accredited by the NAAC at "B" Level)

#### ANNEXURE - I

#### CURRICULAR PLAN (ODD SEM) -- LECTURER WISE(2022-23)

TITLE OF THE PAPER: Multiple Integration and Applications of Vector Calculus

Name of the Lecturer: **<u>Dr. CH. Srimannarayana</u>** 

CLASS: III <u>BSc</u>

<u>e</u> Sem: <u>5</u>

SUBJECT: MATHEMATICS

PAPER : <u>6</u>B

S.NO	MONTH	HOURS AVAILABLE	SYLLABUS TOPIC	ADDITIONAL INPUT/VALUE		CURRIC	ULAR ACTIV	ITY	CO-0	CURRICULA	AR ACTIVITY		REMARKS
		TITLEADLE		ADDITION	Activity	Hours allotted	Whether conducted	If not alternate date	Activity	Hours allotted	Whether conducted	if not alternate date	
3	JAN'23 (01-07)	6	Unit-4: : Vector integration 1. Line Integrals with examples. 2. Surface Integral with examples.	Properties of Integrals and Vectors	Teaching	5			SEMINAR	3			
	JAN'23 (08-14)	3	3. Volume integral with examples.	Properties of Integrals and Vectors	Teaching	2							
	JAN'23 (15-21)	5	Unit-5: Vector integration applications 1. Gauss theorem and applications of Gauss theorem. 2. Green's theorem in plane and applications of Green's theorem.	Properties of Integrals and Vectors	Teaching	4							
	JAN'23 (23-31)	8	3. Stokes's theorem and applications of Stokes theorem.	Properties of Integrals and Vectors	Teaching	5			QUIZ	1			

(Accredited by the NAAC at "B" Level)

#### ANNEXURE - I

#### CURRICULAR PLAN (ODD SEM) -- LECTURER WISE(2022-23)

TITLE OF THE PAPER: Abstract Algebra

Name of the Lecturer: **<u>Dr. CH. Srimannarayana</u>** 

CLASS: II <u>BSc</u>

Sem: <u>3</u>

SUBJECT: MATHEMATICS

PAPER :  $\mathbf{3}$ 

				ADDITIONAL	C	URRICULA	R ACTIVITY		CO-C	URRICULA	R ACTIVITY		1
S.NO	MONTH	HOURS AVAILABLE	SYLLABUS TOPIC	ADDITIONAL INPUT/VALUE ADDITION	Activity	Hours allotted	Whether conducted	If not alternate date	Activity	Hours allotted	Whether conducted	if not alternate date	REMARKS
1	NOV'22(01- 11)	8	Unit-1: GROUPS : Binary Operation – Algebraic structure – semi group- monoid – Group definition and elementary properties	Properties of Groups	Teaching	5							
	NOV'22(14- 19)	6	Finite and Infinite groups – examples – order of a group, Composition tables with examples.	Properties of Groups	Teaching	5			MID	1			
	NOV'22(21- 26)	6	Unit-2: SUBGROUPS : Complex Definition – Multiplication of two complexes Inverse of a complex- Subgroup definition- examples- criterion for a complex to be a subgroups.	Properties of Groups	Teaching	5							
	NOV'22(28- 30)	3	Criterion for the product of two subgroups to be a subgroup-union and Intersection of subgroups.	Properties of Groups	Teaching	3			Assignment	3			

(Accredited by the NAAC at "B" Level)

#### ANNEXURE - I

### CURRICULAR PLAN (ODD SEM) -- LECTURER WISE(2022-23)

TITLE OF THE PAPER: Abstract Algebra

Name of the Lecturer: **Dr. CH. Srimannarayana** 

CLASS: **II <u>BSc</u>** 

Sem: <u>3</u>

SUBJECT: <u>MATHEMATICS</u>

PAPER : <u>3</u>

				ADDITIONAL		CURRICULA	AR ACTIVITY		CO	-CURRICUL	AR ACTIVITY	7	
S.NO	MONTH	HOURS AVAILABLE	SYLLABUS TOPIC	ADDITIONAL INPUT/VALUE ADDITION	Activity	Hours allotted	Whether conducted	If not alternate date	Activity	Hours allotted	Whether conducted	if not alternate date	REMARKS
2	DEC'22 (01-09)	8	Unit-2: Co-sets and Lagrange's Theorem : Cosets Definition – properties of Cosets– Index of a subgroups of a finite groups– Lagrange's Theorem.	Properties of Groups and Sub Groups	Teaching	4			MID	1			
	DEC'22 (12-17)	6	Unit-3: NORMAL SUBGROUPS : Definition of normal subgroup – proper and improper normal subgroup–Hamilton group – criterion for a subgroup to be a normal subgroup	Properties of Groups and Sub Groups	Teaching	4			Clean & Green	1			
	DEC'22 (19-23)	5	intersection of two normal subgroups – Sub group of index 2 is a normal sub group – quotient group – criteria for the existence of a quotient group.	Properties of Groups and Sub Groups	Teaching	4			Assignment	2			
	DEC'22 (27-031)	5	HOMOMORPHISM : Definition of homomorphism – Image of homomorphism elementary properties of homomorphism – Isomorphism – automorphism definitions and elementary properties–kernel of a homomorphism – fundamental theorem on Homomorphism and applications.	Properties of Groups and Sub Groups	Teaching	4			Quiz	1			

#### (Accredited by the NAAC at "B" Level)

#### ANNEXURE - I

### CURRICULAR PLAN (ODD SEM) -- LECTURER WISE(2022-23)

TITLE OF THE PAPER: Abstract Algebra

Name of the Lecturer: **<u>Dr. CH. Srimannarayana</u>** 

CLASS: **II <u>BSc</u>** 

Sem: <u>3</u>

SUBJECT: <u>MATHEMATICS</u>

PAPER : <u>3</u>

				ADDITIONAL		CURRICUL	AR ACTIVITY		CC	-CURRICUI	LAR ACTIVIT	Y	
S.NO	MONTH	HOURS AVAILABLE	SYLLABUS TOPIC	ADDITIONAL INPUT/VALUE ADDITION	Activity	Hours allotted	Whether conducted	If not alternate date	Activity	Hours allotted	Whether conducted	if not alternate date	REMARKS
3	JAN'23 (01-07)	6	Unit-4: PERMUTATIONS AND CYCLIC GROUPS : Definition of permutation – permutation multiplication – Inverse of a permutation – cyclic permutations – transposition – even and odd permutations – Cayley's theorem.	Properties of Groups and Co-sets	Teaching	4			SEMINAR	3			
	JAN'23 (08-14)	3	Cyclic Groups :- Definition of cyclic group – elementary properties – classification of cyclic groups.	Properties of Groups and Co-sets	Teaching	2							
	JAN'23 (15-21)	5	Unit-5: RINGS : Definition of Ring and basic properties, Boolean Rings, divisors of zero and cancellation laws Rings, Integral Domains, Division Ring and Fields.	Properties of Groups and Co-sets	Teaching	4							
	JAN'23 (23-31)	8	The characteristic of a ring - The characteristic of an Integral Domain, The characteristic of a Field. Sub Rings, Ideals	Properties of Groups and Co-sets	Teaching	6			QUIZ	1			

#### (Accredited by the NAAC at "B" Level)

#### ANNEXURE - I

### CURRICULAR PLAN (ODD SEM) -- LECTURER WISE(2022-23)

TITLE OF THE PAPER: Differential Equations

Nar	ne of the Lectu	arer: Dr. CH	. Srimannarayana	CLASS: <b>I</b>	<u>BSc</u>	Sem:	<u>1</u>	SUBJ	ECT: <u>MATH</u>	EMATIC	<u>CS</u>	PAPER	: <u>1</u>
						CURRICUL	AR ACTIVITY		CO-	CURRICUL	AR ACTIVITY		
S.NO	MONTH	HOURS AVAILABLE	SYLLABUS TOPIC	ADDITIONAL INPUT/VALUE ADDITION	Activity	Hours allotted	Whether conducted	If not alternate date	Activity	Hours allotted	Whether conducted	if not alternate date	REMARKS
1	NOV'22(01- 11)	8	Unit-1: Linear Differential Equations,.	Properties of Differentiation and Integration	Teaching	6			MID	1			
	NOV'22(14- 19)	6	Differential Equations Reducible to Linear Form.	Properties of Differentiation and Integration	Teaching	6							
	NOV'22(21- 26)	6	Integrating Factor, Change of Variables.	Properties of Differentiation and Integration	Teaching	4			Assignment	3			
	NOV'22(28- 30)	3	Unit-2: Orthogonal Trajectories	Properties of Differentiation and Integration	Teaching	2							

(Accredited by the NAAC at "B" Level)

#### ANNEXURE - I

### CURRICULAR PLAN (ODD SEM) -- LECTURER WISE(2022-23)

#### TITLE OF THE PAPER: Differential Equations

Name of the Lecturer: Dr. CH. Srimannarayana

CLASS: **I<u>BSc</u>** 

Sem: <u>1</u>

SUBJECT: MATHEMATICS

PAPER :  $\mathbf{1}$ 

				ADDITIONAL		CURRICUL	AR ACTIVITY		CO	-CURRICUL	AR ACTIVITY		
S.NO	MONTH	HOURS AVAILABLE	SYLLABUS TOPIC	ADDITIONAL INPUT/VALUE ADDITION	Activity	Hours allotted	Whether conducted	If not alternate date	Activity	Hours allotted	Whether conducted	if not alternate date	REMARKS
2	DEC'22 (01-09)	8	Unit-2: Differential Equations of first order but not of the first degree: Equations solvable for p; Equations solvable for y; Equations solvable for x; Equations that do not contain x (or y); Equations homogeneous in x and y;Equations of the first degree in x and y – Clairaut's Equation.	Properties of Linear Equations	Teaching	4			MID	1			
	DEC'22 (12-17)	6	Unit-3: Higher order linear differential equations-I: Solution of homogeneous linear differential equations of order n with constant coefficients; Solution of the non-homogeneous linear differential equations with constant coefficients by means of polynomial operators.	Properties of Linear Equations	Teaching	4			Clean & Green	1			
	DEC'22 (19-23)	5	General Solution of f(D)y=0. General Solution of f(D)y=Q when Q is a function of x, 1 f D is expressed as partial fractions. P.I. of f(D)y = Q when Q= ax be P.I.	Properties of Linear Equations	Teaching	4			Assignment	2			
	DEC'22 (27-031)	5	f(D)y = Q when Q is bsinax or b cos ax.	Properties of Linear Equations	Teaching	4			Quiz	1			

(Accredited by the NAAC at "B" Level)

#### ANNEXURE - I

### CURRICULAR PLAN (ODD SEM) -- LECTURER WISE(2022-23)

#### TITLE OF THE PAPER: Differential Equations

Name of the Lecturer: **Dr. CH. Srimannarayana** 

CLASS: **IBSc** 

Sem: <u>1</u>

.

SUBJECT: MATHEMATICS

PAPER : **1** 

				ADDITIONAL		CURRICUL	AR ACTIVITY		CC	-CURRICUL	AR ACTIVITY		
S.NO	MONTH	HOURS AVAILABLE	SYLLABUS TOPIC	ADDITIONAL INPUT/VALUE ADDITION	Activity	Hours allotted	Whether conducted	If not alternate date	Activity	Hours allotted	Whether conducted	if not alternate date	REMARKS
3	JAN'23 (01-07)	6	Unit-4: Higher order linear differential equations-II: Solution of the non- homogeneous linear differential equations with constant coefficients. P.I. of f(D)y = Q when Q= k bx P.I. of f(D)y = Q when Q= ax e V, where V is a function of x.	Properties of Binomial Expansion	Teaching	4			SEMINAR	3			
	JAN'23 (08-14)	3	P.I. of f(D)y = Q when Q= xV , where V is a function of x. P.I. of f(D)y = Q when Q= m x V , where V is a function of x.	Properties of Binomial Expansion	Teaching	2							
	JAN'23 (15-21)	5	Unit-5: Higher order linear differential equations-III : Method of variation of parameters; Linear differential Equations with non-constant coefficients;	Properties of Binomial Expansion	Teaching	4							
	JAN'23 (23-31)	8	The Cauchy-Euler Equation, Legendre's linear equations, miscellaneous differential equations	Properties of Binomial Expansion	Teaching	6			QUIZ	1			

(Accredited by the NAAC at "B" Level)

#### ANNEXURE - I

#### CURRICULAR PLAN (ODD SEM) -- LECTURER WISE(2022-23)

TITLE OF THE PAPER: Integral Transforms with Applications

Name of the Lecturer: **<u>Dr. CH. Srimannarayana</u>** 

CLASS: III <u>BSc</u>

Sem: <u>5</u>

SUBJECT: <u>MATHEMATICS</u>

PAPER : **7B** 

				ADDITIONAL	(	CURRICULA	AR ACTIVITY		CO-	CURRICUL	AR ACTIVITY		
S.NO	MONTH	HOURS AVAILABLE	SYLLABUS TOPIC	ADDITIONAL INPUT/VALUE ADDITION	Activity	Hours allotted	Whether conducted	If not alternate date	Activity	Hours allotted	Whether conducted	if not alternate date	REMARKS
1	NOV'22(14- 19)	6	Unit-1: Laplace transforms- I 1. Definition of Laplace transform, linearity property- piecewise continuous function.	Properties of Integrals	Teaching	5			MID	1			
	NOV'22(21- 26)	6	2. Existence of Laplace transform, functions of exponential order and of class A.	Properties of Integrals	Teaching	5			Assignment	3			
	NOV'22(28- 30)	3	<ol> <li>First shifting theorem, second shifting theorem and change of scale property.</li> </ol>	Properties of Integrals	Teaching	2							

(Accredited by the NAAC at "B" Level)

#### ANNEXURE - I

### CURRICULAR PLAN (ODD SEM) -- LECTURER WISE(2022-23)

TITLE OF THE PAPER: Integral Transforms with Applications

Name of the Lecturer: Dr. CH. Srimannarayana

CLASS: III <u>BSc</u> Sem: <u>5</u>

SUBJECT: MATHEMATICS

PAPER : <u>**7B**</u>

				ADDITIONAL		CURRICUL	AR ACTIVITY		CO	-CURRICUL	AR ACTIVITY	<del>,</del>	
S.NO	MONTH	HOURS AVAILABLE	SYLLABUS TOPIC	ADDITIONAL INPUT/VALUE ADDITION	Activity	Hours allotted	Whether conducted	If not alternate date	Activity	Hours allotted	Whether conducted	if not alternate date	REMARKS
2	DEC'22 (01-09)	8	<ul> <li>Unit-2: Laplace transforms- II (15h) 1.</li> <li>Laplace Transform of the derivatives, initial value theorem and final value</li> <li>theorem. Laplace transforms of integrals.</li> <li>2. Laplace transform of tn . f (t), division by t, evolution of integrals by Laplace transforms.</li> </ul>	Properties of Laplace Transforms	Teaching	4			MID	1			
	DEC'22 (12-17)	6	<ol> <li>Second Strategy 2 (2010)</li> <li>Second Strategy 2 (</li></ol>	Properties of Laplace Transforms	Teaching	4			Clean & Green	1			
	DEC'22 (19-23)	5	Unit-3: Inverse Laplace transforms (15h) 1. Definition of Inverse Laplace transform, linear property, first shifting theorem, second shifting theorem, change of scale property, use of partial fractions. 2. Inverse Laplace transforms of derivatives, inverse, Laplace transforms of integrals, multiplication by powers of 'p', division by 'p'.	Properties of Laplace Transforms	Teaching	4			Assignment	2			
	DEC'22 (27-031)	5	3. Convolution, convolution theorem proof and applications.	Properties of Laplace Transforms	Teaching	4			Quiz	1			

#### (Accredited by the NAAC at "B" Level)

#### ANNEXURE - I

### CURRICULAR PLAN (ODD SEM) -- LECTURER WISE(2022-23)

TITLE OF THE PAPER: Integral Transforms with Applications

Name of the Lecturer: **Dr. CH. Srimannarayana** 

CLASS: III <u>BSc</u>

Sem: <u>5</u>

CURRICULAR ACTIVITY

SUBJECT: MATHEMATICS

 $\underline{CS} \qquad PAPER : \underline{7B}$ 

CO-CURRICULAR ACTIVITY

						CURRICUL	AK ACTIVITY			-CUKRICUL	LAR ACTIVITY	Ĺ	
S.NO	MONTH	HOURS AVAILABLE	SYLLABUS TOPIC	ADDITIONAL INPUT/VALUE ADDITION	Activity	Hours allotted	Whether conducted	If not alternate date	Activity	Hours allotted	Whether conducted	if not alternate date	REMARKS
3	JAN'23 (01-07)	6	Unit-4: :Applications of Laplace transforms (15h) 1. Solutions of differential equations with constants coefficients, solutions of differential equations with variable coefficients. 2. Applications of Laplace transforms to integral equations- Abel's integral equation.	Properties of Laplace Transforms	Teaching	4			SEMINAR	3			
	JAN'23 (08-14)	3	3. Converting the differential equations into integral equations, converting the integral equations into differential equations.	Properties of Laplace Transforms	Teaching	2							
	JAN'23 (15-21)	5	Unit-5: Fourier transforms (15h) 1. Integral transforms, Fourier integral theorem (without proof), Fourier sine and cosine integrals.	Properties of Laplace Transforms	Teaching	4							
	JAN'23 (23-31)	8	2. Properties of Fourier transforms, change of scale property, shifting property, modulation theorem. Convolution. 3. Convolution theorem for Fourier transform, Parseval's Identify, finite Fourier transforms.	Properties of Laplace Transforms	Teaching	6			QUIZ	1			

# SGK GOVERNMENT DEGREE COLLEGE VINUKONDA



# CURRICULAR PLANS 2022-23

NAME OF THE LECTURER:DR. CH. SRIMANNARAYANADEPARTMENT:MATHEMATICS

ANNUAL ACADEMIC CURRICULAR PLAN 2022 - 2023

#### Name of the College : SGK GOVERNMENT DEGREE COLLEGE Name of the Lecturer : DR. CH SRIMANNARAYANA

#### Name of the Department : MATHEMATICS

#### Class : B.Sc Year : II Sem : IV Paper : V

					C	urricula	r Activity	1	Co	o-curricular	Activity		
S N	Month & Week	H ou rs	Syllabus/Topic	Addit ional Input/ Value Addit ion	Activity	Ho urs all ott ed	Wh ethe r Con duc ted	If not, Alte rnat e Date	Activity	Hours allotted	Whet her condu cted	If not, Alte rnat e Dat e	R e m a r k s
			Paper : Linear Algebra										
			Unit-1 : Vector Spaces-I		Teachin g								
	March I	4	Vector Spaces and its General properties, n-dimensional Vectors, addition and scalar multiplication of Vectors, internal and external composition, Null space		Teachin g	4							
	March II	4	Vector subspaces, Algebra of Subspaces, Linear Sum of two subspaces, linear combination of Vectors, Linear span		Teachin g	4							
	March III	6	Linear independence and Linear dependence of Vectors.		Teachin g	5			Assignmen t	1			
			Unit-2 : Vector Spaces-II										
	March IV	5	Basis of Vector space, Finite dimensional Vector spaces, basis extension, co-ordinates		Teachin g	5							
	March V	4	Dimension of a Vector space, Dimension of a subspace		Teachin g	4							
	April I	4	Quotient space and Dimension of Quotient space.		Teachin g	3			Asssignme nt	1			

#### ANNUAL ACADEMIC CURRICULAR PLAN 2022 - 2023

Name of the College : SGK GOVERNMENT DEGREE COLLEGE Name of the Lecturer : DR. CH. SRIMANNARAYANA

Name of the Department : MATHEMATICSClass : B.ScYear : IISem : IVPaper : V

S	Mont	Но		Additiona	Cı	ırricular	Activity		Co	-curricula	r Activity		
N 0	h k Week	urs Av aila ble	Syllabus/Topic	l Input/Val ue Addition	Activity	Ho urs all ott ed	Whe ther Con duct ed	If not, Alte rnat e Date	Activity	Hour s allott ed	Whet her condu cted	If not, Alter nate Date	Rema rks
			Unit-3 : Linear Transformations		Teaching								
	April II	5	Linear transformations, linear operators, Properties of L.T, sum and product of LTs, Algebra of Linear Operators.		Teaching	2			Mid Examinatio n	3			
	April III	5	Range and null space of linear transformation, Rank – Nullity Theorem		Teaching	4			Quiz	1			
	April IV	6	Rank and Nullity of linear transformations		Teaching	6							
			Unit-4 : Matrices										
	May I	6	Matrices, Elementary Properties of Matrices, Inverse Matrices, Rank of Matrix		Teaching	3			Mid Examinatio n	3			
	May II	5	Linear Equations, Characteristic Roots, Characteristic Values Summer Vacation(May 13 -		Teaching	4			Assignmen t	1			
	June I	5	June 4) Cayley – Hamilton Theorem.		Teaching	4			Quiz	1			

#### ANNUAL ACADEMIC CURRICULAR PLAN 2022 - 2023

Name of the College : SGK GOVERNMENT DEGREE COLLEGE Name of the Lecturer : DR. CH. SRIMANNARAYANA

# Name of the Department : MATHEMATICSClass : B.ScYear : IISem : IVPape

Paper : V

		H o			Cu	rricula	Activity		Со-сі	urricula	ar Activity		
S N o	Mont h & Week	u r s A v a i l a b l e	Syllabus/Topic	Additional Input/Value Addition	Activity	H o u r s a l l o t t t e d	Whe ther Con duct ed	If not, Altern ate Date	Activity	H o u r s a l l o t t t e d	Whet her condu cted	If not, Alter nate Date	Rema rks
			Unit-5 : Inner Product Space										
	June II	6	Inner product spaces, Euclidean and unitary spaces, Norm or length of a Vector, Schwartz inequality, Triangle Inequality, Parallelogram law		Teaching	6							
	June III	6	Orthogonality, Orthonormal set, complete orthonormal set		Teaching	5			Student Seminars	1			
	June IV	5	Gram – Schmidt orthogonalisation process, Bessel's inequality and Parseval's Identity		Teaching	5							
	July I	6	Revision and Remedial Classes		Teaching								

ANNUAL ACADEMIC CURRICULAR PLAN 2022 - 2023

#### Name of the College : SGK GOVERNMENT DEGREE COLLEGE Name of the Lecturer : DR. CH. SRIMANNARAYANA

#### Name of the Department : MATHEMATICS

Class : B.Sc Year : I Sem : II Paper : 2

S	Mont	Hour		Additi onal	C	urricular	Activity		C	o-curricu	lar Activit	у	Rema rks
N o	h & Week	s Avai lable	Syllabus/Topic	Input/ Value Additi on	Activity	Hou rs allot ted	Whe ther Con duct ed	If not, Alter nate Date	Activity	Hou rs allot ted	Whet her condu cted	If not, Alter nate Date	
			Paper : Solid Geometry										
1	Marc h II	4	Equation of plane in terms of its intercepts on the axis, through given points, length of perpendicular		Teaching	4							
2	Marc h III	6	Bisectors of angles,		Teaching	5			Assign ment-1	1			
	Marc h IV	5	Combined equation of two planes		Teaching	5							
3	Marc h V	4	Equation of a line, Angle between a line and a plane, Image of a point and a line		Teaching	3			Quiz	1			
4	April I	4	Co-planarity, Skew Lines		Teaching	2			Mid Exam	3			
5	April II	5	Equation of the sphere with given conditions; Plane sections of a sphere; Intersection of two spheres, Sphere through a given circle		Teaching	5							
6	April III	5	Intersection of a sphere and a line, Tangent plane,		Teaching	4			Assign ment-3	1			
	April IV	6	Pole and Polar plane, Conjugate points and planes, Angle between two spheres		Teaching	6							

#### ANNUAL ACADEMIC CURRICULAR PLAN 2022 - 2023

Name of the College : SGK GOVERNMENT DEGREE COLLEGE

Name of the Department : MATHEMATICS

Paper : 2

Sem : II

		H o				Curricula	r Activity		Co-	-curric	ular Activ	ity	
S N o	Mont h & Week	u r s A v a i l a b l e	Syllabus/Topic	Addition al Input/Va lue Addition	Activity	Ho urs allo tted	Whet her Cond ucted	If not, Alternat e Date	Activity	H o u r s a l l o t t t e d	Whet her condu cted	If not, Alter nate Date	Rema rks
7	May 1	6	Orthogonal Spheres, Radical plane,		Teaching	3			Mid- Exam	3			
	May II	5	Coaxial system of spheres.		Teaching	5							
			Summer Vacation(May 13 - June 4)										
8	June I	5	Equation of the cone with a given vertex and guiding curve,		Teaching	4			Assignm ent-3	1			
9	June II	6	Enveloping cone of a sphere, Condition for an equation to be a cone, mutually perpendicular generators		Teaching	6							
10	June III	6	Intersection of a line and a quadric cone, Tangent lines and tangent plane at a point, Reciprocal cones, Intersection of two cones with a common vertex.		Teaching	5			Seminar	1			
	June IV	5	Revision and Remedial Classes		Teaching	5							
	July I	6	Revision and Remedial Classes		Teaching	6							

#### ANNUAL ACADEMIC CURRICULAR PLAN 2022 - 2023

Name of the College : SGK GOVERNMENT DEGREE COLLEGE

Name of the Department : MATHEMATICS

Sem : IV Paper : IV

						Curric	ular Activit	ty	Co-	curricu	ılar Activi	ty	
S N o	Month & Week	Ho urs Av ail abl e	Syllabus/Topic	Addit ional Input/ Value Addit ion	Activity	H o u r s a l l o t t t e d	Whethe r Conduc ted	If not, Alternat e Date	Activity	H o u r s a l l o t t e d	Whet her condu cted	If not, Alter nate Date	Rema rks
			Paper : Real Analysis			u				u			
			Unit-1 : Real Numbers										
	March I	4	Introduction and basic properties of Real numbers		Teachin g	4							
	March II	4	The Cauchy's criterion, properly divergent sequences, Monotone sequences, Necessary and Sufficient condition for Convergence of Monotone Sequence, Limit Point of Sequence,		Teachin g	4							
	March III	6	Subsequences and the Bolzano-Weierstrass theorem, Cauchy Sequences, Cauchy's general principle of convergence theorem. Unit-2 : Infinite Series		Teachin g	5			Assignme nt	1			
	March IV	5	Introduction to series, convergence of series, Cauchy's general principle of convergence for series tests for convergence of series, Series of Non- Negative terms, P-test		Teachin g	4			Quiz	1			

#### ANNUAL ACADEMIC CURRICULAR PLAN 2022 - 2023

Name of the College : SGK GOVERNMENT DEGREE COLLEGE Name of the Lecturer : CH. SRIMANNARAYANA Name of the Department : MATHEMATICSClass :B.ScYear : IISem : IVPaper : IV

						Curricula	r Activity		Co-	-curric	ular Activi	ity	
S N o	Mont h & Week	Hours Availa ble	Syllabus/Topic	Additional Input/Val ue Addition	Activity	Hours allott ed	Whet her Cond ucted	If not, Altern ate Date	Activity	H o u r s a l l o t t t e d	Whet her condu cted	If not, Alter nate Date	Rema rks
	March V	4	Cauchey's nth root test or Root Test, D'-Alemberts' Test or Ratio Test		Teachin g	4							
	April I	4	Alternating Series – Leibnitz Test, Absolute convergence and conditional convergence, semi convergence.		Teachin g	4							
			Unit-3 : Limits										
	April II	5	Real valued Functions, Boundedness of a function, Limits of functions. Some extensions of the limit concept, Infinite Limits, Limits at infinity.		Teachin g	2			Mid Examina tion	3			
	April III	5	Continuous functions, Combinations of continuous functions		Teachin g	4			Assignm ent	1			
	April IV	6	Continuous Functions on intervals, uniform continuity.		Teachin g	6							

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S	Mant	Но				Curricula	r Activity		Co	-curricul	ar Activit	y	
N o	Mont h & Week	urs Av ail abl e	Syllabus/Topic	Additional Input/Value Addition	Activity	Hour s allott ed	Wheth er Condu cted	If not, Altern ate Date	Activity	Hou rs allot ted	Wh ethe r con duct ed	If not, Alter nate Date	Rem arks
			Unit-4 : Differentiation and Mean	Value Theorem	ms								
	May I	6	The derivability of a function, on an interval, at a point, Derivability and continuity of a function		Teaching	3			Mid Examina tion	1			
	May II	5	Graphical meaning of the Derivative, Rolle's Theorem		Teaching	4			Quiz	1			
			Summer Vacation(May13 - June 4)										
	June I	5	Lagrange's Theorem, Cauchy's Mean value Theorem		Teaching	5							
			Unit-5 : Riemann Integration										
	June II	6	Riemann Integral, Riemann integral functions, Darboux theorem		Teaching	5			Assignm ent	1			
	June III	6	Necessary and sufficient condition for R – integrability, Properties of integrable functions,		Teaching	6							
	June IV	5	Fundamental theorem of integral calculus, integral as the limit of a sum, Mean value Theorems.		Teaching	5							
	July I	6	Revision/Remedial Classes		Teaching	6							