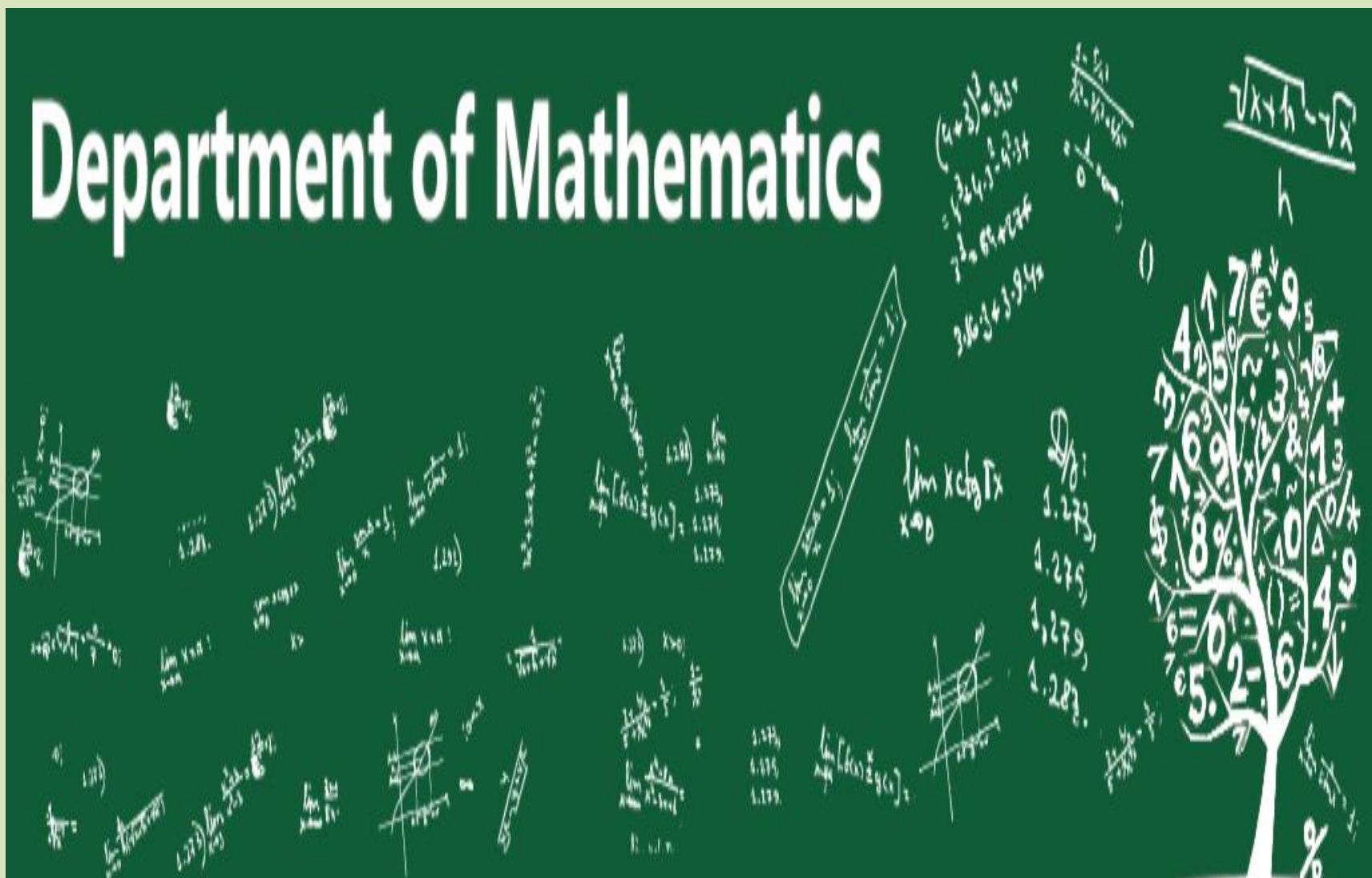# GOVERNMENT DEGREE COLLEGE
PALONCHA
BHADRADRI KOTHAGUDEM DISTRICT
TELANGANA STATE
(Affiliated to Kakatiya University)

DEPARTMENTAL PROFILE

INDEX

INTRODUCTION

The Department of Mathematics was started in 2009 with the B.Sc.(MPC) (TELUGU MEDIUM) course. The Department organizes Mathematical Field Trips and study tours at different places for studying and acquiring knowledge skills and visited different Local institutions (As per MOU). Field work experiences at field and Institutes. The faculty is always available to guide and council the students and remain friendly and accessible. Special coaching for different entrance examinations after graduation. Departmental Library is also available with reference books. The Department of Mathematics has available Departmental Library and Digital Library and again Reading Room, Computers Lab Facility is available to students with Internet Facility.

Department of Mathematics was established in the year 2009-10 with B.Sc.,(MPC) (TELUGU MEDIUM) Course in ug section. Initially B.Sc.(MPC) Telugu Medium programme was offered, subsequently B.Sc.(MPC's) E.M. programme was introduced in the academic year 2018-19. B.Sc.,(MPC)(EM) & B.Sc.,(MPC's)(EM) ug courses are continuing in present. In UG courses CBCS system introduced since 2016-17 academic year.

AIMS AND OBJECTIVES

❖ **Recognize that mathematics permeates the world around us appreciate the usefulness, power and beauty of mathematics.**
❖ **Enjoy mathematics and develop patience and persistence when solving problems.**
❖ **Understand and be able to use the language, symbols and notation of mathematics.**
❖ **Develop mathematical curiosity and use inductive and deductive reasoning when solving problems.**

VISION & MISSION

The Vision of the Mathematics Department

✧ **To create an enlighten society of educated young minds with scientific temperament, logical analysis and rational thinking.**

The Mission of the Mathematics Department

✧ **By preparing the students not only for the three year academic phase but also for the Period where they have to struggle individually for their careers and jobs. The Mission of the Department of Mathematics is to advance the Mathematical Sciences through the education of undergraduate students by providing them with quality class room, reesearch and service opportunities, With a high standard for excellence in all three areas the department will produce students who are knowledgeable in mathematics and can think critically.**

STRENGTH, WEAKNESS OPPORTUNITIES AND CONSTRAINTS

Strengths: Efficient, sincere and hardworking team of faculty members, many of whom have talents other than teaching. A well-equipped laboratory and teachers with research experience

Weakness: Despite the best efforts put in by the faculty members could produce only a few rankers in PG entrance.

Opportunities: Students are very hard working and sincere so that the Department can have better meritorious achievements. With the talents in students to develop better overall personality. With infrasturctural facilities quality education can be carried out by students and teacher.

Challanges: To promote hard work and uplift the scholastic capacities of students through appropriate motivation is a major challenge. To cultivate research aptitude among them.

BIODATA OF THE STAFF

- ❖ **NAME**   : P.SRINIVASA RAO
- ❖ **DESIGNATION** : LECTURER IN MATHEMATICS
- ❖ **EDUCATION/QUALIFICATION:** M.Sc. S.E.T. M.Phil. B.Ed.
- ❖ **EXPERIENCE:** 22 YEARS

CRITERIA-I

CURRICUAR ASPECTS

COURSES OFFERED

❖ Department of Mathematics was established in the year 2009-10 with B.Sc.,(MPC) (TELUGU MEDIUM) Course in ug section.

❖ Initially B.Sc.(MPC) Telugu Medium programme was offered, subsequently B.Sc.(MPC's) E.M. programme was introduced in the academic year 2018-19.

❖ B.Sc.,(MPC)(EM) & B.Sc.,(MPC's)(EM) ug courses are continuing in present.

❖ In UG courses CBCS system introduced since 2016-17 academic year.

■ In Present Academic Year Offered Courses: B.Sc.,(MPC)(EM) ; AND B.Sc.,(MPC's)(EM)

Syllabus 2016 Year Wise

Course	Papers	Topics	Max. Marks
B.Sc.,	I YEAR	DIFFERENTIAL EQUATIONS	50+100=150
	II YEAR	REAL ANALYSIS	50+100=150
	III Year : paper-III	LINEAR ALGEBRA	50+100=150
	III Year : paper-IV	NUMERICAL ANALYSIS	50+100=150

Syllabus 2016-19 Semester Wise

Course	Papers	Topics	Max. Marks
B.Sc.,	I Year I Sem (Sem-1)	Differential Calculus & Integral Calculus	20+80=100
	I Year II Sem (Sem-2)	Differential Equations	20+80=100
	II Year I Sem (Sem-3)	Real Analysis	20+80=100
	II Year II Sem (Sem-4)	Abstract Algebra	20+80=100
	III Year I Sem (Sem-5)	Paper-1: Linear AlgebraPaper-2: Vector Calculus	20+80=100 20+80=100
	III Year II Sem (Sem-6)	Paper-1: Analytical Solid GeometryPaper-2: Numerical Analysis	20+80=100 20+80=100

Syllabus From Year 2019
Semester Wise

Course	Papers	Topics	Max. Marks
B.Sc.,	I Year I Sem (Sem-1)	Differential Calculus & Integral Calculus	20+80=100
	I Year II Sem (Sem-2)	Differential Equations	20+80=100
	II Year I Sem (Sem-3)	Real Analysis	20+80=100
	II Year II Sem (Sem-4)	Abstract Algebra	20+80=100
	III Year I Sem (Sem-5)	Paper-1: Linear AlgebraPaper-2: Vector Calculus	20+80=100 20+80=100
	III Year II Sem (Sem-6)	Paper-1: Analytical Solid GeometryPaper-2: Numerical Analysis	20+80=100 20+80=100

Syllabus from Academic Year 2021-22
Semester Wise

Course	Papers	Topics	Max. Marks
B.Sc.,	I Year I Sem (Sem-1)	Differential Calculus & Integral Calculus	20+80=100
	I Year II Sem (Sem-2)	Differential Equations	20+80=100
	II Year I Sem (Sem-3)	Real Analysis	20+80=100
	II Year II Sem (Sem-4)	Abstract Algebra	20+80=100
	III Year I Sem (Sem-5)	Linear Algebra	20+80=100 20+80=100
	III Year II Sem (Sem-6)	VI-A: Numerical Analysis VI-B: INTEGRAL TRANSFORMS VI-C: ANALYTICAL SOLID GEOMETRY(ELECTIVE PAPER: VI-C)	20+80=100 20+80=100

DEPARTMENT OF MATHEMATICS
PAPERS AND CREDITS

SL.NO.	PAPER	TITLE OF THE PAPER	THEORY CREDITS	PRACTICAL CREDITS	TOTAL CREDITS
1	I	DIFFERENTIAL AND INTEGRAL CALCULUS ; DIFFERENTIAL EQUATIONS	4	1	5
2	II	REAL ANALYSIS ; ABSTRACT ALGEBRA	4	1	5
3	III	LINEAR ALGEBRA ; VECTOR CALCULUS	4	1	5
4	IV	ANALYTICAL SOLID GEOMETRY ; NUMERICAL ANALYSIS	4	1	5
5	DSE-IA (SEM-5)	Basic Mathematics(OR)Mathematics for Economics & Finance	4	1	5
6	DSE-IIB (SEM-6)	Theory of Equations (OR)Logic & Sets	4	1	5

COURSE OUTCOMES OF B.Sc., (MATHEMATICS)
I (semester-1):
2.1 Differential and Integral Calculus
DSC-1A   BS: 101

Theory: 5 credits and Tutorials: 0 credits

Theory: 5 hours/week and Tutorials: 1 hours/week

Objective: The course is aimed at exposing the students to some basic notions in differential calculus.

Outcome: By the time students complete the course they realize wide ranging applications of the subject.

Unit-I

Partial Differentiation: Introduction - Functions of two variables - Neighbour hood of a point (a, b) - Continuity of a Function of two variables, Continuity at a point - Limit of a Function of two variables - Partial Derivatives - Geometrical representation of a Function of two Variables - Homogeneous Functions.

Unit-II

Theorem on Total Differentials - Composite Functions - Differentiation of Composite Functions - Implicit Functions - Equality of $f_{xy}(a,b)$ and $f_{yx}(a,b)$ -- Taylor's theorem for a function of two Variables - Maxima and Minima of functions of two variables - Lagrange's Method of undetermined multipliers.

Unit-III

Curvature and Evolutes: Introduction - Definition of Curvature - Radius of Curvature - Length of Arc as a Function, Derivative of arc - Radius of Curvature - Cartesian Equations - Newtonian Method - Centre of Curvature - Chord of Curvature.

Evolutes: Evolutes and Involutes - Properties of the evolute.

Envelopes: One Parameter Family of Curves - Consider the family of straight lines - Definition - Determination of Envelope.

Unit-IV

Lengths of Plane Curves: Introduction - Expression for the lengths of curves y=f(x) - Expressions for the length of arcs x=f(y); x=f(t), y=Φ(t) ; r=f(θ)

Volumes and Surfaces of Revolution: Introduction - Expression for the volume obtained by revolving about either axis - Expression for the volume obtained by revolving about any line - Area of the surface of the frustum of a cone - Expression for the surface of revolution - Pappus Theorems - Surface of revolution.

Text:
- Shanti Narayan, P.K.Mittal Differential Calculus, S.CHAND, NEW DELHI
- Shanti Narayan Integral Calculus, S.CHAND, NEW DELHI

References:

- William Anthony Granville, Percey F Smith and William Raymond Longley ; Elements of the Differential and integral calculus
- Joseph Edwards, Differential calculus for beginners
- Smith and Minton, Calculus
- Elis Pine, How to Enjoy Calculus
- Hari Kishan, Differential Calculus

SEMESTER-II

2.2 DIFFERENTIAL EQUATIONS

DSC-1B   BS: 201
Theory: 5 credits and Tutorials: 0 credits
Theory: 5 hours/week and Tutorials: 1 hours/week

Objective: The main aim of this course is to introduce the students to the techniques of solving differential equations and to train to apply their skills in solving some of the problems of engineering and science.

Outcome: After learning the course the students will be equipped with the various tools to solve few types differential equations that arise in several branches of science.

Unit-I

Differential Equations of first order and first degree: Introduction - Equations in which variables are Separable- Homogeneous Differential Equations - Differential Equations Reducible to Homogeneous Form - Linear Differential Equations - Differential Equations Reducible to Linear Form - Exact differential equations - Integrating Factors - Change in variables - Total Differential Equations - Simultaneous Total Differential Equations - Equations of the form $\frac{dx}{P} = \frac{dy}{Q} = \frac{dz}{R}$

Unit-II

Differential Equations first order but not of 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.

Applications of First Order Differential Equations: Growth and Decay - Dynamics of Tumour Growth - Radoactivity and Carbon Dating - Compound Interest - Orthogonal Trajectories

Unit-III

Higher Order Linear Differential Equations: Solution of homogeneous linear differential equations with constant coefficients - Solution of non-homogeneous differenial equations P(D)y=Q(x) with constant coefficients by means of polynomial operators when Q(x) =b.e^{ax} ,   b. sin ax, b.cos ax, b.x^k, V.e^{ax} - Method of undetermined coefficients.

Unit-IV

Method of variation of parameters - Linear differential equations with non constant coefficients - The Cauchy-Euler Equation - Legendre's Linear Equations - Miscellaneous Differential Equations
Partial Differential Equations: Formation and solution - Equations easily integrable - Linear equations of first order.

Text:
- Zafar Ahsan, Differential Equations and Their Applications

References:
- **Frank Ayres Jr. Theory and Problems of Differential Equations**
- **Ford, L.R ; Differential Equations**
- **Daniel Murray, Differential Equations**
- **S.Balachandra Rao, Differential Equations with Applications and Programs**
- **Stuart P Hastings, J Bryce McLead; Classical Methods in Ordinary Differential Equations**

SEMESTER-III

2.3 REAL ANALYSIS

DSC-1C   **BS: 301**

Theory: 5 credits and Tutorials: 0 credits

Theory: 5 hours/week and Tutorials: 1 hours/week

Objective: The course is aimed at exposing the students to the foundations of analysis which will be useful in understanding various physical phenomena.

Outcome: After the completion of the course students will be in a position to appreciate beauty and applicability of the course.

Unit-I

Sequences: Limits of Sequences - A Discussion about Proofs - Limit Theorems for Sequences - Monotone sequences and Cauchy Sequences - Subsequences - Lim sup's and Lim inf's - Series - Alternating series and Integral Tests

Unit-II

Continuity: Continuous Functions - Properties of Continuous Functions - Uniform Continuity - Limits of Functions

Unit-III

Differentiation: Basic Properties of the Deruvatuve - The Mean Value Theorem - L'Hospital Rule - Taylor's Theorem

Unit-IV

Integration: The Riemann Integral - Properties of Riemann Integral Fundamental Theorem of Calculus

Text:
- **Kenneth A Ross, Elementary Analysis - The Theory of Calculus**

References

● S.C.Malik and Savita Arora, Mathematical Analysis, Second Edition, Wiley Eastern Limited, New Age International (P) Limited, New Delhi, 1994.
● William F.Trench, Introduction to Real Analysis
● Lee Larson, Introduction to Real Analysis I
● Shanti Narayan and Mittal, Mathematical Analysis
● Brian S.Thomson, Judith B.Bruckner, Andrew M. Bruckner; Elementary Real Analysis
● Sudhir R., Ghorpade, Balmohan V., Limaye; A Course in Calculus and Real Analysis

SEMESTER-IV

2.4 Algebra

DSC-1D   BS: 401

Theory: 5 credits and Tutorials : 0 credits

Theory: 5 hours/week and Tutorials; 1 hours/week

Objective: The course is aimed at exposing the students to learn some basic algebraic structure like groups, rings etc.

Outcome: On successful completion of the course students will be able to recognize algebraic structures that arise in matrix algebra, linear algebra and will be able to apply the skills learnt in understanding various such subjects.

Unit-I

Groups: Definition and Examples of Groups - Elementary Properties of Groups - Finite Groups - Subgroups

- Terminology and Notation - Subgroup Tests - Examples of Subgroups.
Cyclic Groups: Properties of Cyclic Groups - Classification of Subgroups Cyclic Groups
Unit-II
Permutation Groups: Definition and Notation - Cycle Notation - Properties of Permutations - A Check Digit Scheme Based on D_5 .   Isomorphisms; Motivation - Definition and examples - Cayley's Theorem Properties of Isomorphisms - Auto morphisms - Coses and Lagange's Theorem Properties of Cosets 138 - Lagrange's Theorem and Consequences - An Application of Cosets to Permutation Groups - The Rotation Group of a Cube and a Soccer Ball.

Unit-III

Normal Subgroups and Factor Groups: Normal Subgroups - Factor Groups - Applications of Factor Groups - Group Homomorphisms - Definition and Examples - Properties of Homomorphisms - The First Isomorphism Theorem
Introduction to Ring: Motivation and Definition - Examples of Rings - Properties of rings - Subrings.
Integral Domains: Definition and Examples - Fields - Characteristics of a Ring

Unit-IV

Ideals and Factor Rings: Ideals - Factor Rings - Prime Ideals and Maximal Ideals
Ring Homomorphisms: Definition and Examples - Properties of Ring Homomorphisms

Text:
● Joseph A Gallian, Contemporary Abstract algebra (9th edition)

References:
● Bhattacharya, P,B,Jain, S.K.; and Nagpaul, S.R.Basic, Abstract Algebra
● Fraleigh, J.B., A First Course in Abstract Algebra
● Herstein, I.N., Topics in Algebra
● Robert B.Ash, Basic Abstract Algebra
● I.Martin Isaacs, Finite Group Theory
● Joseph J.Rotman, Advanced Modern Algebra

SEMESTER-V

2.5 Linear AlgebraDSC-E
        BS:501

Theory: 5 credits and Tutorials; 0 credits

Theory: 5 hours/work and Tutorials: 1 hours/week

Objective: The students are exposed to various conceptslike vector spaces, bases, dimension, Eigen values etc.

Outcome: After completion this course students appreciate its interdisciplinary nature.

Unit-I

Vector Spaces: VectorSpaces and Subspaces - Null Spaces, Column Spaces, and Linear Transformations - Linealy Independent Sets, Bases - Coordinate Systems - The Dimension of a VectorSpace

Unit-II

Rank-Change of Basis - Eigen values and Eigen vectors - The Characteristic Equation

Unit-III

Diagonalization - Eigen vectors and Linear Transformations - Complex Eigen values - Applications to Differential Eqauations

Unit-IV

Orthogonality and Least Squares: Inner Product, Length and Orthogonality - Orthogonal Sets - Orthogonal Projections - The Gram-Schmidt Process

Text:
- **David C Lay, Linear Algebra and its Applications 4e**

References:

- **S Lang, Introduction to Linear Algebra**
- **Gilbert Strang, Linear Algebra and its Applications**
- **Stephen H.Friedberg, Arnold J.Insel, Lawrence E.Spence; Linear Algebra**
- **Kuldeep Singh; Linear Algebra**
- **Sheldon Axier; Linear Algebra Done Right**

SEMESTER-VI

2.6 NUMERICAL ANALYSIS
DSC-1F/A   **BS:601/A**

Theory: 5 credits and Tutorials: 0 credits
Theory: 5 hours/week and Tutorials; 1 hours/week

Objective: Students will be made to understand some methods of numerical analysisOutcome:
Students realise the importance of the subject in solving some problems of algebra and calculus

Unit-I
Errors in Numerical Calculations - Solutions of Equations in One Variable: The Bisection Method -
The Iteration Method - The Method of False Position - Newton's Method - Muller's Method - solution of
Systems of Nonlinear Equations

Unit-II
Interpolation and Polynomial approximation: Interpolation - Finite Differences - Differences of
Polynomials - Newton's formula for Interpolation - Gauss's central differences formulae - Stirling's and

Bessel's formula - Lagrange's Interpolation Polynomial - Divided DIFFERENCES _ Newton'S General Interpolation formula - Inverse Interpolation

Unit-III
Curve Fitting: Least Squares - Curve Fitting: Fitting a Straight Line - Nonlinear Curve Fitting
Numerical Differentiation and Integration: Numerical Differentiation - Numerical Integration - TrapezoidalRule - Simpson's 1/3 rd Rule and Simpson's 3/8 th Rule - Boole's and Weddle's Rule - Newton's Cotes Integration Formulae.

Unit-IV
Numerical Solutions of Ordinary Differential Equations: Taylor's Series Method - Picard's Method - Euler'sMethods - Runge Kutta Methods.

Text:
- Richard L.Burden and J.Douglas Faires, Numerical Analysis (9e)
- S.S.Sastry, Introductory Methods of Numerical Analysis, PHI

References:
- M.K.Jain,   S.R.K.Iyengar and R.K.Jain, Numerical Methods for Scientific and engineering computation
- B.Bradie, A Friendly introduction to Numerical Analysis

SEMESTER-VI
2.7 Integral TransformsDSC - VI-B
            BS-601/B
Theory: 5 credits and Tutorials: 0 credits
Theory: 5 hours/week and Tutorials: 1 hours/week

Objective: Students will be exposed to Integral Transforms. The students also learning the ApplicationsofLaplace Transforms to differntial Equations which arises in Physics and Engineering Problems.

Outome: Students apply their knowledge to solve some problems on special functions and Differential Equations by using the Integral Transforms

Unit-I
Laplace Transforms - Definition - Existence theorem - Laplace transforms of derivatives and integrals - Periodic functions and some special functions.

Unit-II
Inverse Transformations - Convolution theorem - Heaviside's expansion formula

Unit-III
Applications to ordinary differential equations - solutions of simultaneous ordinary differential equations-Applications to Partial differential equations

Unit-IV
Fourier Transforms - Sine and cosine transforms - Inverse Fourier Transforms

Text:
- Vasishtha and Gupta, Integral Transforms, Krishna Prakashan Media (P), Ltd., Meerut (2e)

SEMESTER-VI
2.8 ANALYTICAL SOLID GEOMETRY
DSE-1F/C   **BS:601/C**

Theory: 5 credits and Tutorials: 0 credits
Theory: 5 hours/week and Tutorials: 1 hour/week

Objective: Students learn to describe some of the surfaces by using analytical geometry.
Outcome: Students understand the beautiful interplay between algebra and geometry.

Unit-I
Sphere: Definition- The Sphere Through Four Given Points - Equations of a Circle - Intersection of a Sphere and a Line - Equation of a Tangent Plane - Angle of Intersection of Two Spheres - Radical Plane.

Unit-II
Cones and Cylinders: Definition - Condition that the General Equation of second degree Represents a Cone - Cone and a Plane through its Vertes - Intersection of a Line with a Cone

Unit-III
The Right Circular Cone - The Cylinder - The Right Circular Cylinder

Unit-IV
The Conicoid: The General Equation of the Second Degree - Intersection of Line with a Conicoid - Plane of contact - Enveloping Cone and Cylinder.

Text:
 - **Shanti Narayan and P.K.Mittal, Analytical solid Geometry (17e)**

References:
- Khaleel Ahmed, Analytical Solid Geometry
- S.L.Loney, Solid Geometry
- Smith and Minton, Calculus

TIME TABLE 2020-21

DAY & PERIOD	I PERIOD 9-30 to 10-30	II PERIOD 10-30 to 11-30	III PERIOD 11-30 to 12-30	IV PERIOD 12-30 to 01-15	LUNCH BREAK 01-15 to 02-00	V PERIOD 02-00 to 03-00	VI PERIOD 03-00 to 04-00
MONDAY	M3			M2	L	M3	M3
TUESDAY	M3		M2	M1	U	M1	M1
WEDNESDAY	M1	M2	M3		N		
THURSDAY	M4				C	M2	M2
FRIDAY	M4	M1	M2			M4	M4
SATURDAY	M4		M1		H		

WEEKLY WORK LOAD: 22 PERIODS
NOTE: M1-FIRST YEAR
NOTE: M2-SECOND YEAR
NOTE: M3- THIRD YEAR-PAPER-1
NOTE: M3=THIRD YEAR-PAPER-2

TIME TABLE 2021-22

DAY & PERIOD	I PERIOD 10-	II PERIOD 11-00 to	III PERIOD 12-	LUNCH BREAK	IV PERIOD	V PERIOD 14-30 to	VI PERIOD

	00 to 11-00	12-00	00 to 13-00	13-00 to 13-30	13-30 to 14-30	15-30	15-30 to 16-30
MONDAY	M3	M1		L	M2	MATHS RELATED PAPER TEACH TO MPC/MPC's/BZC	
TUESDAY		M1		U		M2	M2
WEDNESDAY	M3	M1		N		M3	M3
THURSDAY	M2	M1	M3	C	M1	M1	M1
FRIDAY	M1	M2	M3	H			
SATURDAY	M2					M3	M3

WEEKLY WORK LOAD: 23 PERIODS
NOTE: M1-FIRST YEAR
NOTE: M2-SECOND YEAR
NOTE: M3- THIRD YEAR
FF

FACULTY WISE WORK LOAD

S.No.	NAME OF THE FACULTY	THEORY HOURS/PRACTICAL HOURS
1	P.SRINIVASA RAO	23 HOURS PER WEEK

GRAND TOTAL 23 HOURS WORK LOAD PER WEEK

CRITERIA-II

TEACHING, LEARNING AND EVALUATION

❖ **The Department have been regularly conducting the following activities**

- ❖ **Field Trips**
- ❖ **Student Class Room Seminars**
- ❖ **Quiz Programmes**
- ❖ **Group Discussions**
- ❖ **Student Assignments**
- ❖ **Extension Lectures**

STUDENT ENROLLMENT & PROFILE

(II)TEACHING AND LEARNING EVALUATION

2.1 STUDENT ENROLLMENT & PROFILE

TABLE SHOWING THE DETAILS OF B.Sc., Students Particulars Community/Gender wise

ACADEMIC YEARS	SC	ST	BC	OC	TOTAL BOYS	TOTAL GIRLS	GRAND TOTAL
2016-17	01	21	09	00	17	14	31
2017-18	01	18	05	00	11	13	24
2018-19	05	17	18	03	26	17	43
2019-20	18	33	30	06	58	29	87
2020-21	14	42	42	06	63	41	104

## CHART SHOWING BY COMMUNITY AND GENDER WISE
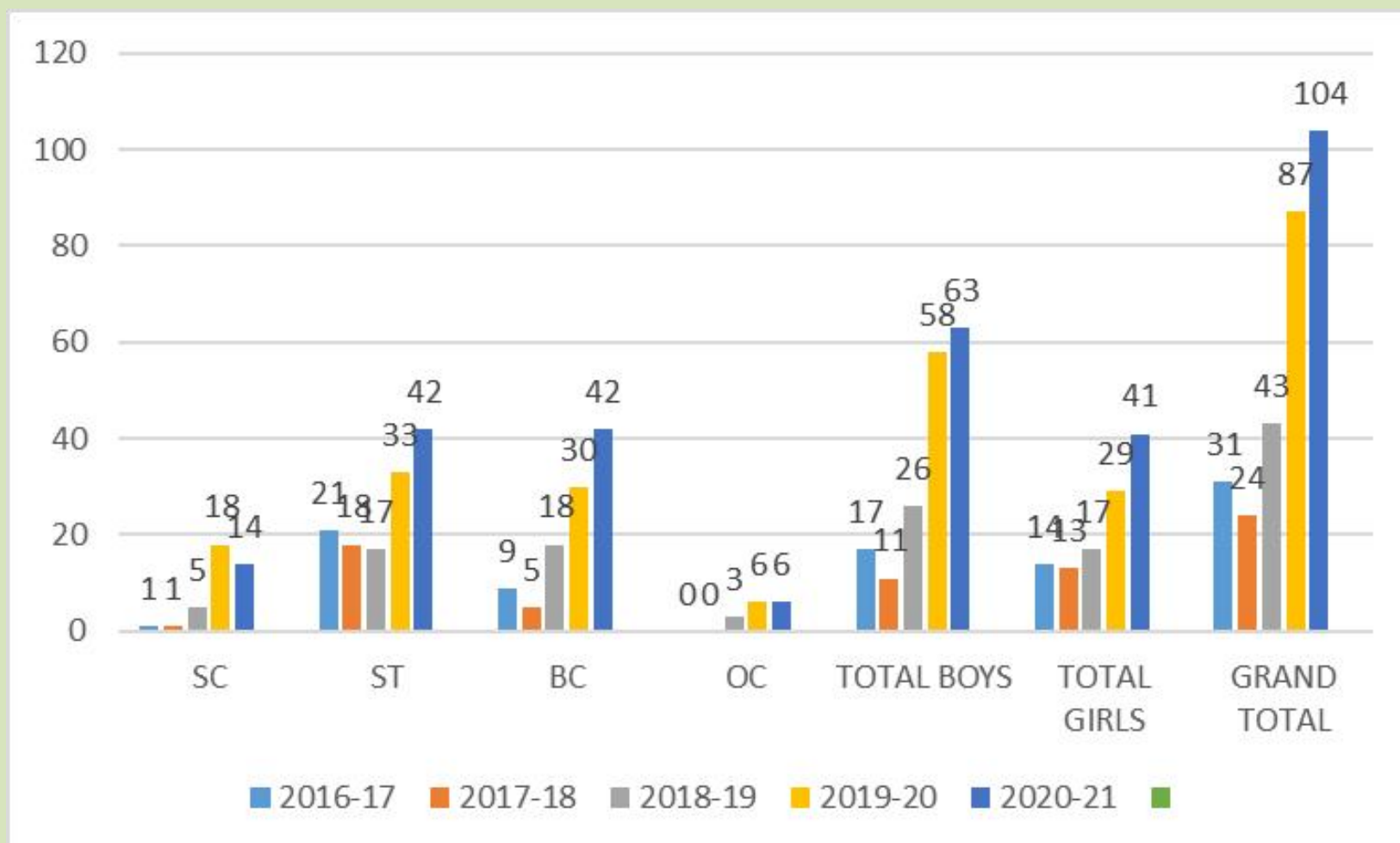
GOVERNMENT DEGREE COLLEGE, PALONCHA
ANNUAL RESULT OF MATHEMATICS -LAST FIVE YEARS

YEAR	GROUP	APPEARED	PASSED	PASS

|				PERCENTAGE
2016-17	B.Sc.(MPC-TM)	42	22	52.49%
2017-18	B.Sc.(MPC-TM)	28	13	46.43%
2018-19	B.Sc.(MPC & MPC's-TM & EM)	81	39	48.15%
2019-20	B.Sc.(MPC & MPC's-TM & EM)	102	30	29.41%
2020-21	B.Sc.(MPC & MPC's-TM & EM)	221	172	77.83%

ANNUAL RESULT OF MATHEMATICS -LAST FIVE YEARS
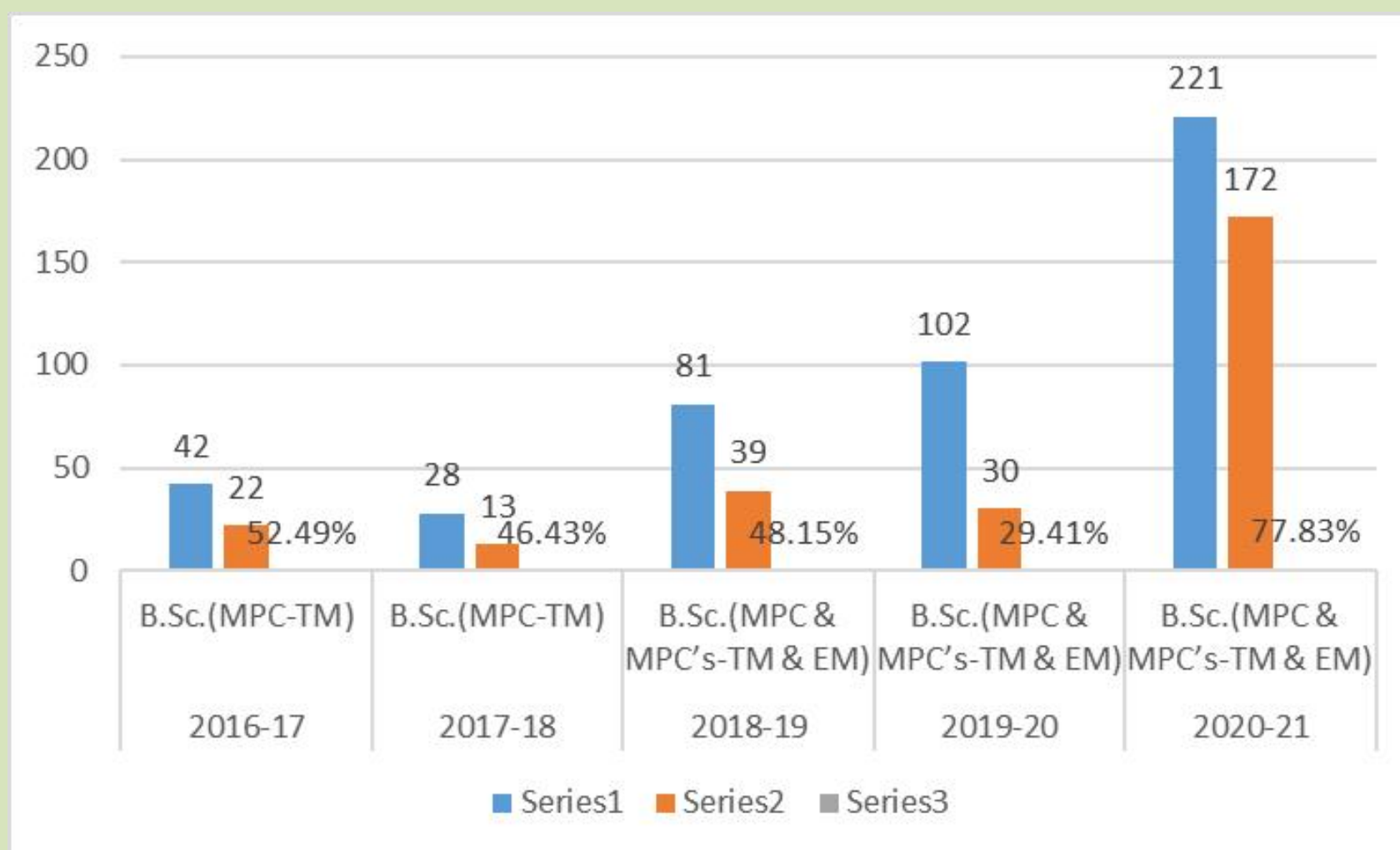
Y

MATHS RESULT ANALYSIS - B.Sc., SEMESTER WISE

SL. N	PARTICULARS	APPEARED	PASSED	PASS PERCENTAG

O.				E
1	2016-17 I year semester-1	04	02	50%
2	2016-17 I year semester-2	04	02	50%
3	2017-18 I year semester-1	05	02	40%
4	2017-18 I year semester-2	05	03	60%
5	2017-18 II year semester-3	04	02	50%
6	2017-18 II year semester-4	04	02	50%
7	2018-19 I year semester-1	28	13	46.43%
8	2018-19 I year semester-2	27	12	44.45%
9	2018-19 II year semester-3	04	01	25%
10	2018-19 II year semester-4	04	03	75%
11	2018-19 III year semester-5 (PAPER-III)	05	03	60%
12	2018-19 III year semester-5(PAPER-IV)	05	02	40%
13	2018-19 III year semester-6(PAPER-III)	04	02	50%
14	2018-19 III year semester-6(PAPER-IV)	04	03	75%
15	2019-20 I year semester-1	24	13	54%
16	2019-20 I year semester-2	24	11	46%
17	2019-20 II year semester-3	22	11	50%
18	2019-20 II year semester-4	22	09	41%
19	2019-20 III year semester-5(PAPER-III)	05	03	60%
20	2019-20 III year semester-5(PAPER-IV)	05	03	60%
21	2019-20 III year semester-6(PAPER-III)	05	03	60%
22	2019-20 III year semester-6(PAPER-IV)	05	03	60%
23	2020-21 I year semester-1	38	26	68.42%
24	2020-21 I year semester-2	37	18	48.65%
25	2020-21 II year semester-3	28	28	100%
26	2020-21 II year semester-4	28	10	36%
27	2020-21 III year semester-5(PAPER-III)	22	22	100%
28	2020-21 III year semester-5(PAPER-IV)	22	22	100%
29	2020-21 III year semester-6(PAPER-III)	23	23	100%
30	2020-21 III year semester-6(PAPER-IV)	23	23	100%

SEMESTERWISE RESULT FROM 2016-17 TO 2020-21
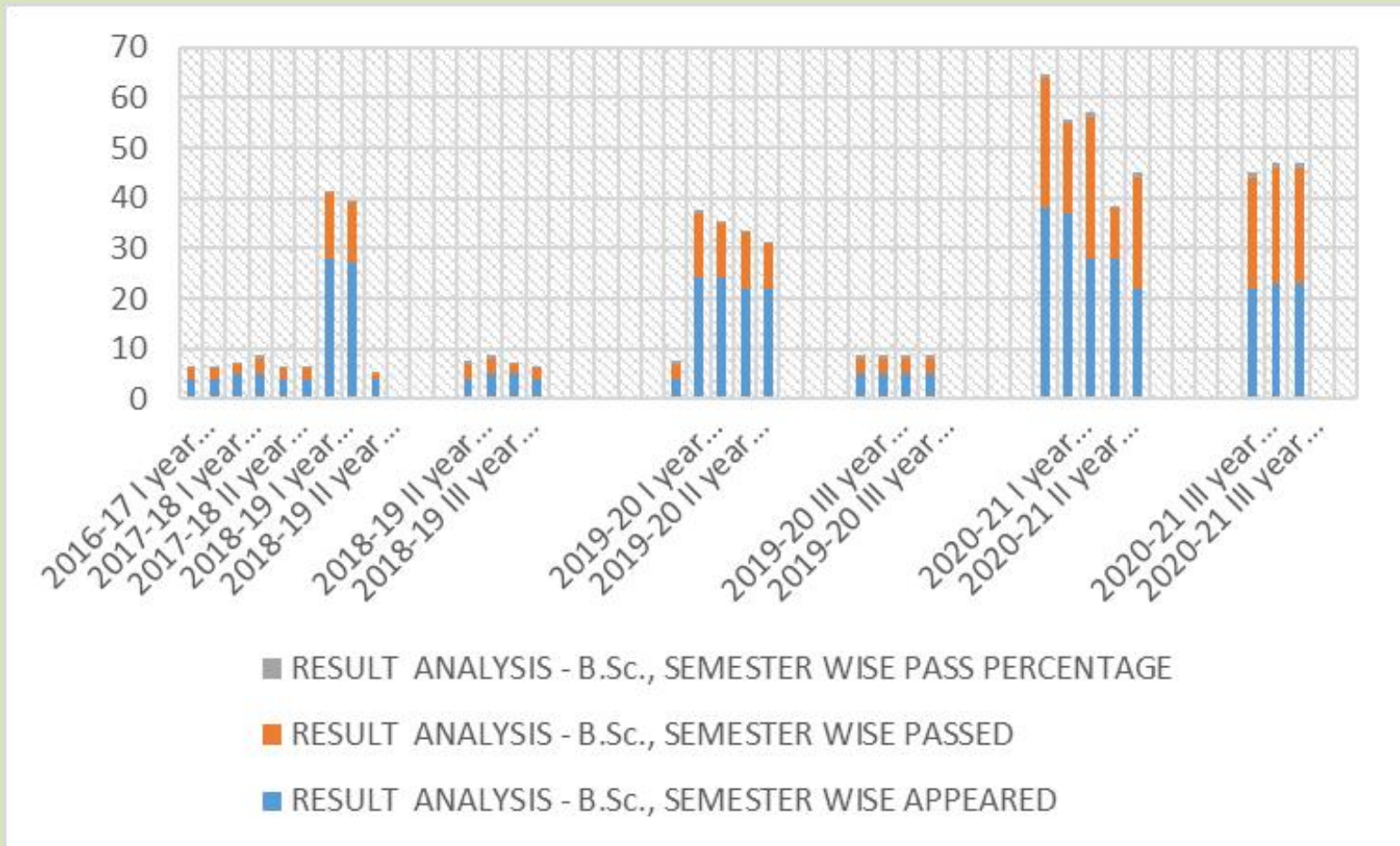
PIONEERS OF THE DEPARTMENT

❖ Name of the Lecturer: Sri POTLAPUVVU SRINIVASA RAO

❖ Qualification: M.Sc., S.E.T. M.Phil., B.Ed.,

❖ Year of joining in Department: 2010
(continuing services in current academic year till to date)

The Staff Member presently working in the Department

❖ Name of the Lecturer: Sri POTLAPUVVU SRINIVASA RAO

❖ Qualification: M.Sc., S.E.T. M.Phil., B.Ed.,

❖ Year of joining in Department: 2010
(continuing services in current academic year till to date)

Number of Teaching Posts Sanctioned

❖ Howmany Sanctioned Posts Available in Department of Mathematics:

One Teaching
Post Sanctioned in the Department

Name of the Faculty	Qualification	Designation	Specialisation	Total Experience
Sri P.Srinivasa Rao	M.Sc. S.E.T. M.Phil. B.Ed.,	Lecturer	--------	22 Years

STUDENT SEMINAR

| S. N O.	YEAR	NAME OF THE TOPIC	NAME OF THE STUDENT
1	2016-17	**NUMERICAL ANALYSIS**	**KUNJA PRAMEELA**
2	2016-17	LINEAR ALGEBRA	CHILAKAMARRI RAMU
3	2016-17	DIFFERENTIAL EQUATIONS	P.PRABHU KUMAR
4	2017-18	REAL ANALYSIS	P.LAXMI
5	2017-18	PARTIAL DIFFERENTIATION	V.SRINIVAS
6	2017-18	ABSTRACT ALGEBRA	JARPULA PRASAD
7	2018-19	DIFFERENTIAL AND INTEGRAL CALCULUS	A.KUSHAL KUMAR
8	2018-19	ABSTRACT ALGEBRA	A.VINODA
9	2018-19	LINEAR ALGEBRA	G.SUSMITHA
10	2019-20	DIFFERENTIAL AND INTEGRAL CALCULUS	G.MANISHA
11	2019-20	REAL ANALYSIS	T.SURYA PRAKASH
12	2019-20	LINEAR ALGEBRA	K.SHIVA NAGENDRA BABU
13	2020-21	DIFFERENTIAL EQUATIONS	S.GANESH
14	2020-21	ABSTRACT ALGEBRA	B.SRAVANI
15	2020-21	NUMERICAL ANALYSIS	B.DURGA PRASAD

STUDENT SEMINARS - PHOTOGRAPHS
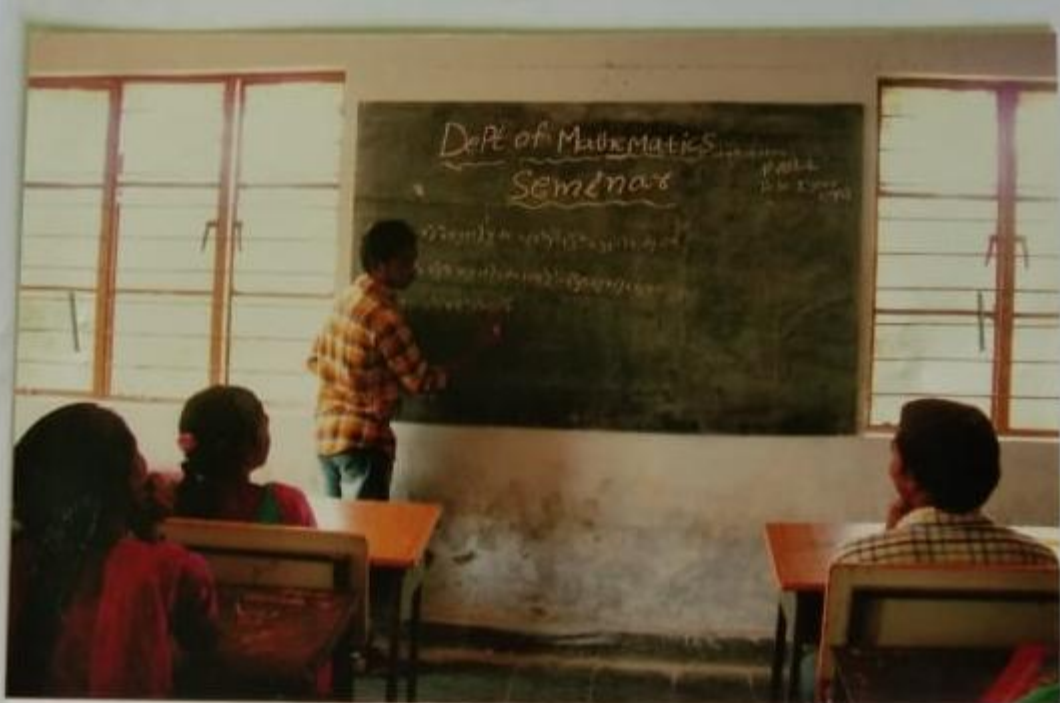
student Seminars
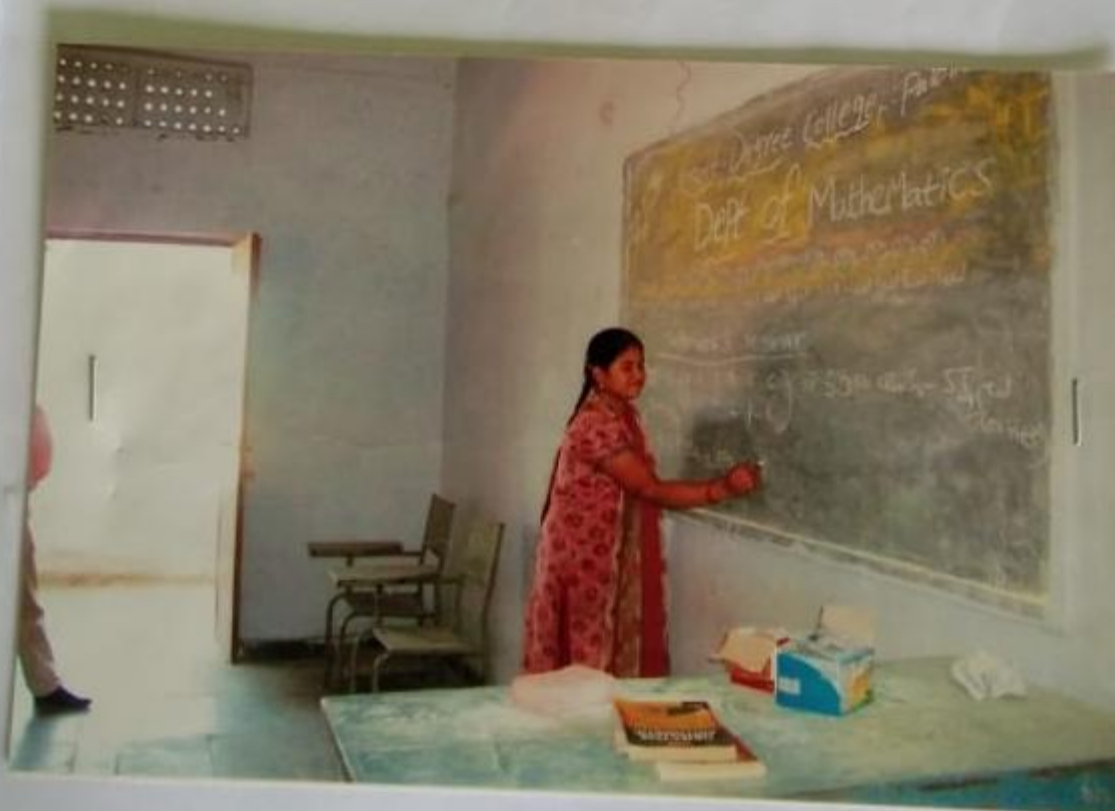
Student Seminars

GDC, PALONCHA
DEPARTMENT
OF
MATHEMATICS

QUIZ PROG. & GROUP DISCUSSIONS

QUIZ PROGRAMME

QUIZ

Academic Innovative Activity - Extension Lecture

S.NO.	YEAR	DATE	NAME	DESIGNATION/NAME OF COLLEGE	TOPIC NAME
1	2016-17	25-09-2016	Smt. Padma Madam	Asst. Professor; SRAS Government Arts & Science College, Kothagudem	RINGS AND FIELDS
2	2017-18	5-2-2018	R.Naga Raju	Lecturer, Government Degree College, Bhadrachalam	REAL ANALYSIS
3	2018-19	4-2-2019	V.Kishore Babu	Lecturer, Kakatiya Degree College, SATHUPALLY	DIFFERENTIAL EQUATIONS
4	2019-20	29-8-2019	R.Naga Raju	Lecturer, Government Degree College, MANUGURU	VEDIC MATHEMATICS
5	2020-21	26-3-2021	Kum. B.Saritha	Lecturer; J.V.R. Government Degree College, SATHUPALLY	VEDIC MATHEMATICS

EXTENSION LECTURES
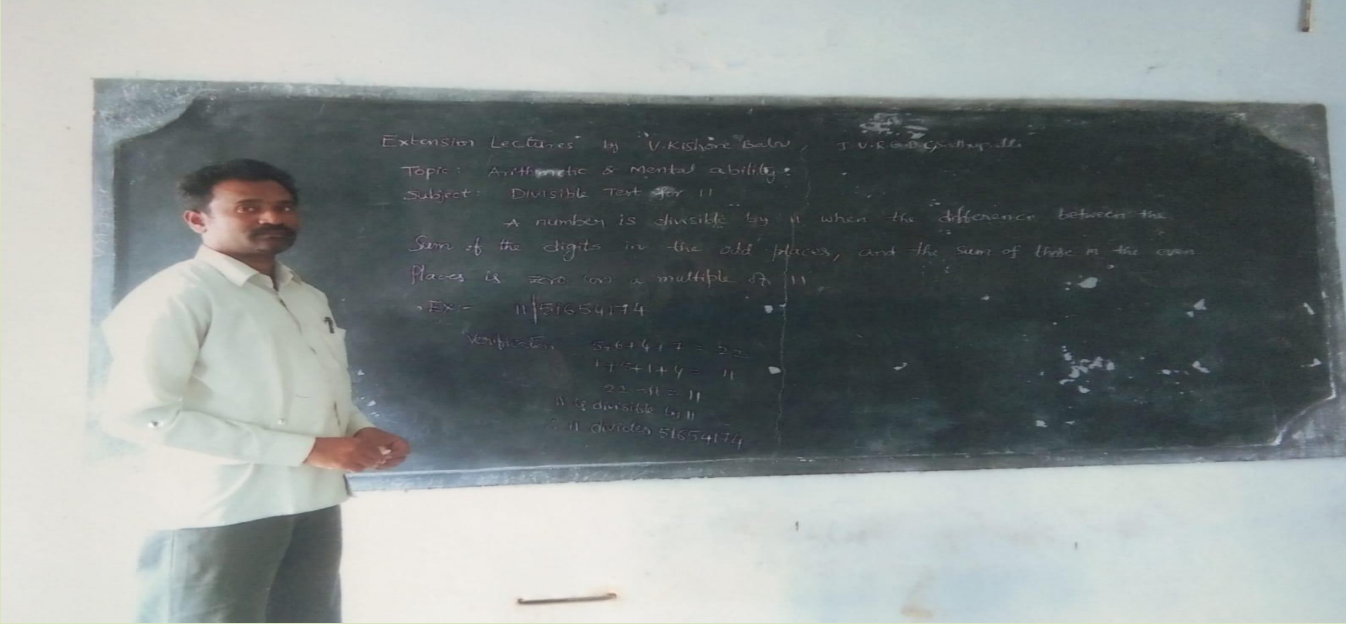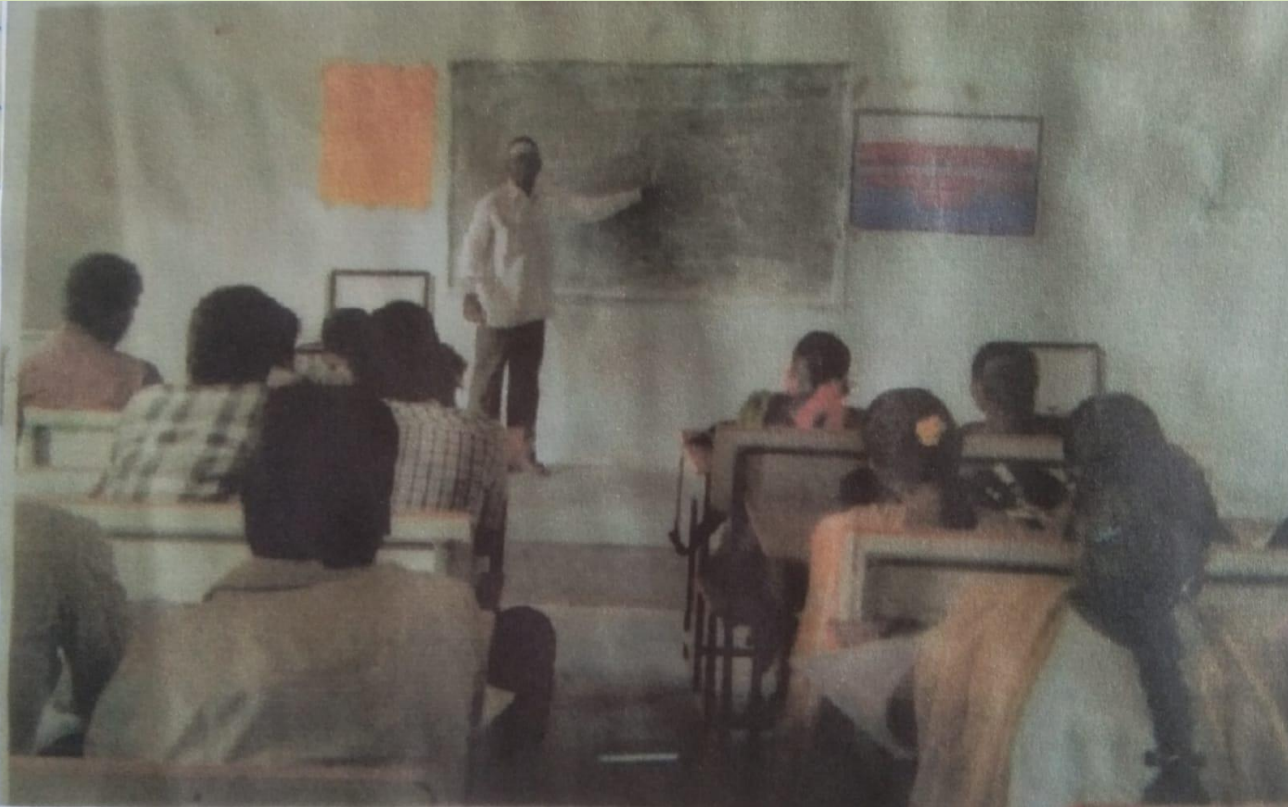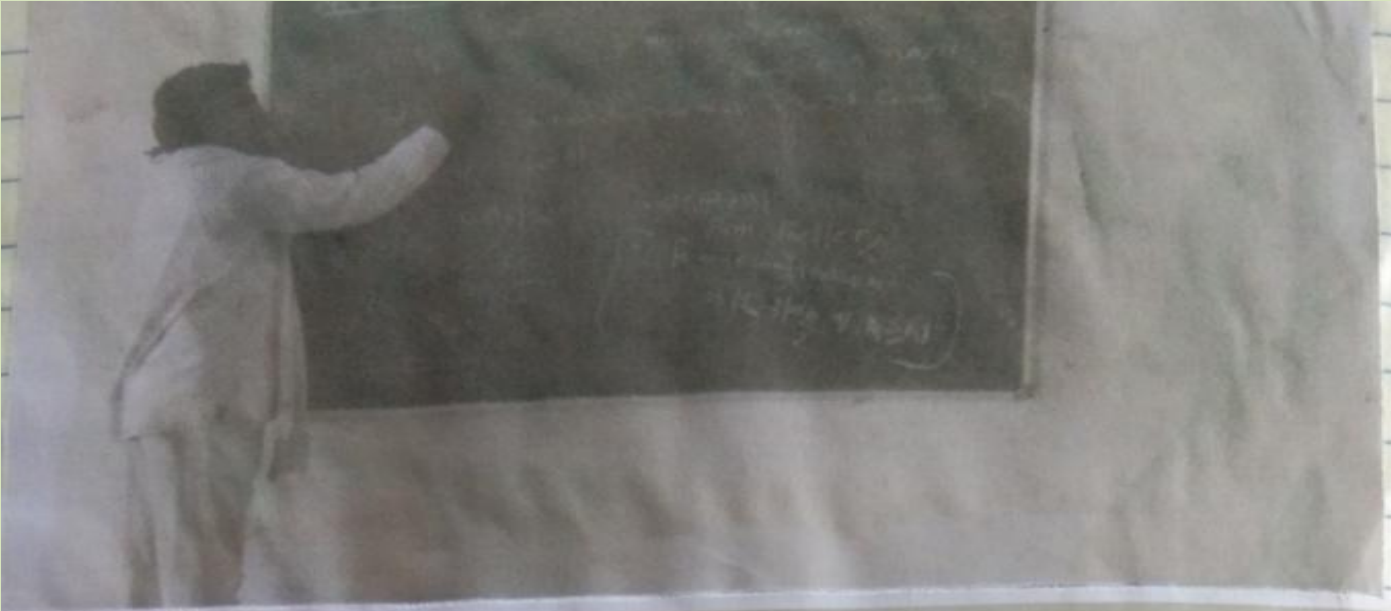
MATHEMATICS DAYCELEBRATION

MATHS DAY CELEBRATIONS

MATHEMATICS DAYCELEBRATION
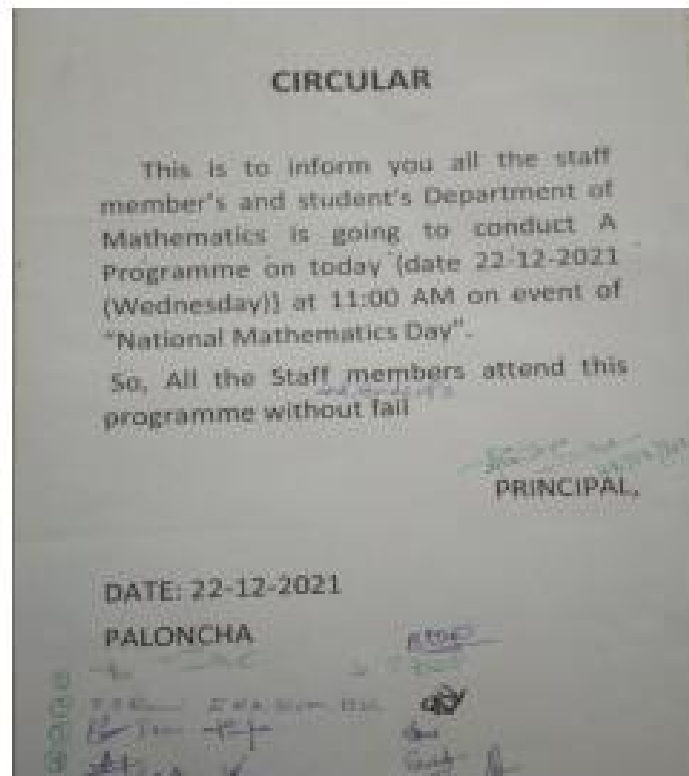
MATHS DAY CELEBRATIONS

FIELD TRIPS

S.NO.	YEAR	NAME OF THE TEACHER INVOLVED/ORGANISER	No. Of Students	Partnering institutiions/Industry/Research Lab with Contact Details	Nature of Linkage
1	2016-17	P.SRINIVASA RAO	12	NAVABHARAT VENTURES, PALONCHA	FIELD TRIPS
2	2017-18	P.SRINIVASA RAO	12	NMDC, PALONCHA	FIELD TRIPS
3	2018-19	P.SRINIVASA RAO	09	NMDC, PALONCHA	FIELD TRIPS
4	2019-20	P.SRINIVASA RAO	12	K.V.SUB STATION, PALONCHA	FIELD TRIPS
5	2020-21	P.SRINIVASA RAO	12	NMDC, PALONCHA	FIELD TRIPS

FIELD TRIP PHOTOGRAPHS

STUDENT STUDY PROJECTS

S.NO.	YEAR	NAME OF TEACHER INVOLVED/ORGANISER	NO. OF STUDENTS	RESEARCH TOPIC/SUBJECT	NATURE OF LINKAGE
1	2016-17	P.SRINIVASA RAO	3	FIRST ORDER DIFFERENTIAL EQUATIONS	STUDY PROJECTS
2	2017-18	P.SRINIVASA RAO	2	ARYABHATTA RESEARCHES	STUDY PROJECTS
3	2017-18	P.SRINIVASA RAO	3	MICRO ELECTRONICS (ON DIGITAL LOGIC TRAINER)	STUDY PROJECTS
4	2018-19	P.SRINIVASA RAO	3	ABOUT SRINIVASA RAMANUJAN	STUDY PROJECTS
5	2018-19	P.SRINIVASA RAO	3	BRILLIANT MATHEMATICIANS	STUDY PROJECTS
6	2019-20	P.SRINIVASA RAO	2	INTERNATIONAL MATHEMATICIANS - FINDINGS	STUDY PROJECTS
7	2019-20	P.SRINIVASA RAO	2	FUN WITH MATHEMATICS	STUDY PROJECTS
8	2020-21	P.SRINIVASA RAO	3	COLLEGE LAND MEASUREMENTS	STUDY PROJECTS

CRITERIA-III

RESEARCH AND INNOVATION AND EXTENSION ACTIVITIES

They function in co-ordination with one another to create and transfer knowledge, for monitoring and addressing the issues related to enhancement of research, innovation and entrepreneur skills among the faculty and students, thus fostering overall growth. The Institute has also followed research & development guidelines.

The faculty are empowered to take up research activities by utilizing the existing facilities provided by college like research journals, equipments, technical lab, computer lab, internet and library. Publication of research outcome in UGC recognized peer reviewed journals and above also upholding the ethics in research activities by avoiding plagiarism are our worth mentioning practicesl

CRITERIA-IV

INFRASTRUCTURE AND LEARNING RESOURCES

INFRASTRUCTURE AND LEARNING RESOURCES

DEPARTMENTAL LIBRARY

Department of Mathematics has a Library with 5 Prescribed Books, Post Graduation Entrance Study Material, 15 Reference Books, 10 P.G. standard books

S.NO.	BOOKS	No.
1	Prescribed Books	05
2	Post Graduation Entrance Study Material	01
3	Reference Books	15
4	P.G. STANDARD BOOKS	10

CRITERIA-V

STUDENT SUPPORTIVE AND PROGRESSION

STUDENT PLACED IN ANY POSITION

S. No .	Year	Name of the Student	Job Designation	Name Employer or personal firm with contact	Package Received	Class Passed by	Passing Year	Remark ref no., copy attached
1	2016-19	GANDURI SUSMITHA	CASHIER	RELIANCE MART	2 LACK			ROLL NO/ H.T.No: 08 1 17 4001

STUDENT PROGRESSION

S.NO.	NAME OF STUDENT	GRADUATE FROM	PG/B.Ed.	YEAR	INSTITUTE NAME
1	CH.RAMU	B.Sc.,	M.Sc.(physics)	2016-17	OSMANIA UNIVERSITY
2	B.NAVEEN	B.Sc.,	M.A.(HINDI)	2016-17	KAKATIYA UNIVERSITY
3	M.MADHU	B.Sc.,	M.A.(HINDI)	2016-17	KAKATIYA UNIVERSITY
4	CH.LAXMAN	B.Sc.,	M.A.(HINDI)	2016-17	KAKATIYA UNIVERSITY

NAME OF STUDENTS PROGRESSING TO HIGHER EDUCATION DURING THE YEAR

YEAR	NAME OF STUDENT ENROLLING INTO HIGHER EDUCATION	PROGRAMME GRADUATED FROM	UNIVERSITY/INSTITUTION	NAME OF PROGRAMME ADMITTED TO
2016-17	CH.RAMU	B.Sc.,	OSMANIA UNIVERSITY	M.Sc.,(Physics)
2017-18	K.SAI KUMARI	B.Sc.,	ITDA B.Ed., COLLEGE, BHADRACHALAM	B.Ed.,
2017-18	MUTYALA RAO	B.Sc.,	MOTHER TERESA COLLEGE, PALONCHA	B.Ed.,
2018-19	G.BHAVANI	B.Sc.,	MOTHER TERESA COLLEGE, PALONCHA	B.Ed.,
2018-19	P.PRABHU KUMAR	B.Sc.,	ITDA B.Ed., COLLEGE, BHADRACHALAM	B.Ed.,
2019-20	R.REVATHI	B.Sc.,	GEETHAM COLLEGE, SATHUPALLI	M.Sc.,(MATHEMATICS)
2020-21	MATTIPALLY UPENDAR	B.Sc.,(M)	J.V.R. GOVERNMENT DEGREE & PG COLLEGE, SATHUPALLY	M.Sc.,(PHYSICS)
2020-21	BATHULA DURGA PRASAD	B.Sc.,(M)	J.V.R. GOVERNMENT DEGREE & PG COLLEGE, SATHUPALLY	M.Sc.,(PHYSICS)
2020-21	VEMULA TEJA	B.Sc.,(M)	J.V.R. GOVERNMENT DEGREE & PG COLLEGE, SATHUPALLY	M.Sc.,(PHYSICS)
2020-21	DEVALLA CHINNI KRISHNA	B.Sc.,(M)	J.V.R. GOVERNMENT DEGREE & PG COLLEGE, SATHUPALLY	M.Sc.,(PHYSICS)
2020-21	PAMARTHI VINAY	B.Sc.,(M)	J.V.R. GOVERNMENT DEGREE & PG COLLEGE, SATHUPALLY	M.Sc.,(PHYSICS)
2020-21	A.KUSHAL KUMAR	B.Sc.,(M)	J.V.R. GOVERNMENT DEGREE & PG COLLEGE, SATHUPALLY	M.Sc.,(PHYSICS)

2020-21	BADAVATH MADHU	B.Sc.,(M)	J.V.R. GOVERNMENT DEGREE & PG COLLEGE, SATHUPALLY	M.Sc.,(PHYSICS)
2020-21	PALAPOLE SWETHA	B.Sc.,(M)	J.V.R. GOVERNMENT DEGREE & PG COLLEGE, SATHUPALLY	M.Sc.,(PHYSICS)
2020-21	NIMMALA SATYA ANIL KUMAR	B.Sc.,(M)	J.V.R. GOVERNMENT DEGREE & PG COLLEGE, SATHUPALLY	M.Sc.,(PHYSICS)
2020-21	GADDAM PRAVEEN	B.Sc.,(M)	J.V.R. GOVERNMENT DEGREE & PG COLLEGE, SATHUPALLY	M.Sc.,(PHYSICS)
2020-21	KAKATI PAVAN	B.Sc.,(M)	J.V.R. GOVERNMENT DEGREE & PG COLLEGE, SATHUPALLY	M.Sc.,(PHYSICS)
2020-21	CH.SAIRAM	B.Sc.,(M)	J.V.R. GOVERNMENT DEGREE & PG COLLEGE, SATHUPALLY	M.Sc.,(PHYSICS)

CRITERIA-VI

GOVERNANCE LEADERSHIP AND MANAGEMENT

DEPARTMENTAL MEATINGS

At the departmental level Departmental level, Department faculty members meet at neccessary days to discuss academic matters like Distribution of syllabus among the faculty review of coverage of syllabus and result analysis and course out comes, important date to celebrate, etc.,

S.NO.	ACADEMIC YEAR	NAME OF THE DEPARTMENT INCHARGE	DESIGNATION
1	2016-17	P.SRINIVASA RAO	LECTURER
2	2017-18	P.SRINIVASA RAO	LECTURER
3	2018-19	P.SRINIVASA RAO	LECTURER
4	2019-20	P.SRINIVASA RAO	LECTURER
5	2020-21	P.SRINIVASA RAO	LECTURER

63

CO-ORDINATOR/MEMBER OF   VARIOUS COMMITTEES

S.NO.	ACADEMIC YEAR	NAME OF FACULTY	CO-ORDINATOR	COMMITTEES MEMBER
1	2016-17	P.SRINIVASA RAO	---	(1)TSKC & PLACEMENT CELL (2)CAREER GUIDANCE CELL/DEET (3)COMPUTER RESOURCE CENTER/COMPUTER LAB (4) BC MINORITY CELL
2	2017-18	P.SRINIVASA RAO	----	(1)TSKC & PLACEMENT CELL (2)CAREER GUIDANCE CELL/DEET (3)COMPUTER RESOURCE CENTER/COMPUTER LAB (4) BC MINORITY CELL
3	2018-19	P.SRINIVASA RAO	----	(1)TSKC & PLACEMENT CELL (2)CAREER GUIDANCE CELL/DEET (3)COMPUTER RESOURCE CENTER/COMPUTER LAB (4) BC MINORITY CELL
4	2019-20	P.SRINIVASA RAO	---	(1)TSKC & PLACEMENT CELL (2)CAREER GUIDANCE CELL/DEET (3)COMPUTER RESOURCE CENTER/COMPUTER LAB (4) BC MINORITY CELL
5	2020-21	P.SRINIVASA RAO	----	(1)TSKC & PLACEMENT CELL (2)CAREER GUIDANCE CELL/DEET (3)COMPUTER RESOURCE CENTER/COMPUTER LAB (4) BC MINORITY CELL

STUDENT SUPPORT AND PROGRESSION

Record of Student Representative / Monitoring Class

S. No.	Year	Class and Section	Name of CLASS rep. with Adm No.	Duration	Remark Ref. No.,
1	2016-17	B.Sc.(M) I Year	PADDAM PRABHU KUMAR, H.T.No: 081174002	ONE YEAR	
2	2016-17	B.Sc.,(M) II Year	DHARMASOTH ISHWARYA, H.T.No: 081164005	ONE YEAR	
3	2016-17	B.Sc.,(M) III Year	CHILAKAMARRI LAXMAN, H.T.No: 081154005	ONE YEAR	
4	2017-18	B.Sc.,(M) I Year	MAMILLAPALLI REVATHI, H.T.No: 081184004	ONE YEAR	
5	2017-18	B.Sc.,(M) II Year	PUSAM LAXMI, H.T.No: 081174003	ONE YEAR	
6	2017-18	B.Sc.,(M) III Year	MOOD RANI, H.T.No: 081164008	ONE YEAR	

Record of Student Representative / Monitoring Class

S.No.	Year	Class and Section	Name of CLASS rep. with Adm No.	Duration	Remark Ref. No.,
7	2018-19	B.Sc.(M) I Year	MATTIPALLY UPENDAR, H.T.No: 081194103	ONE YEAR	
8	2018-19	B.Sc.,(M) II Year	MAMILLAPALLI REVATHI, H.T.No: 081184004	ONE YEAR	
9	2018-19	B.Sc.,(M) III Year	PADDAM PRABHU KUMAR, H.T.No: 081174002	ONE YEAR	
10	2019-20	B.Sc.,(M) I Year	SHAIK SUBHANI, H.T.No: 081204009	ONE YEAR	
11	2019-20	B.Sc.,(M) II Year	FRANCES DEEVANA, H.T.No: 081194205	ONE YEAR	
12	2019-20	B.Sc.,(M) III Year	K.SHIVA NAGENDRA BABU, H.T.No: 081164007	ONE YEAR	

Record of Student Representative / Monitoring Class

S.No.	Year	Class and Section	Name of CLASS rep. with Adm No.	Duration	Remark Ref. No.,
13	2020-21	B.Sc.(M) I Year	GONELA AKSHAYA, H.T.No: 081214109	ONE YEAR	
14	2020-21	B.Sc.,(M) II Year	KANTE SEETHA MAHALAXMI, H.T.No: 081204108	ONE YEAR	
15	2020-21	B.Sc.,(M) III Year	MATTIPALLY UPENDAR, H.T.No: 081194103	ONE YEAR	

Record of
Student Girls Representative/Monitoring Class

S.No.	Year	Class and Section	Name Girls rep. with Adm No.	Duration	Remark Ref. No.,
1	2016-17	B.SC(MPC) III YEAR	KUNJA PRAMEELA, H.T.No: 081154007	ONE YEAR	
2	2017-18	B.SC(MPC) I YEAR	BANOTH SWATHI, H.T.No: 081184002	ONE YEAR	
3	2018-19	B.SC.,(MPC) II YEAR	AZMEERA VINODA, H.T.No: 081184001	ONE YEAR	
4	2019-20	B.SC(MPC) I YEAR	KANTE SEETHA MAHALAXMI, H.T.No: 081204108	ONE YEAR	
5	2020-21	B.SC(MPC) III YEAR	GALLA RACHEL, H.T.No: 081194206	ONE YEAR	

Allotment of
Teacher to Students as Mentor

S.No.	YEAR	Class and Section	Name Teacher	No. of Students	Ref.No. List attach
1	2016-17	B.Sc.,(MPC) II Year	P.SRINIVASA RAO	13	YES
2	2017-18	B.Sc.,(MPC) I Year	P.SRINIVASA RAO	05	YES
3	2018-19	B.Sc.,(MPC) II Year	P.SRINIVASA RAO	05	YES
4	2019-20	B.Sc.,(MPC) III Year	P.SRINIVASA RAO	05	YES
5	2020-21	B.Sc.,(MPC) I Year	P.SRINIVASA RAO	27	YES
6	2021-22	B.Sc.,(MPC) III Year	P.SRINIVASA RAO	14	YES

CRITERIA-VII

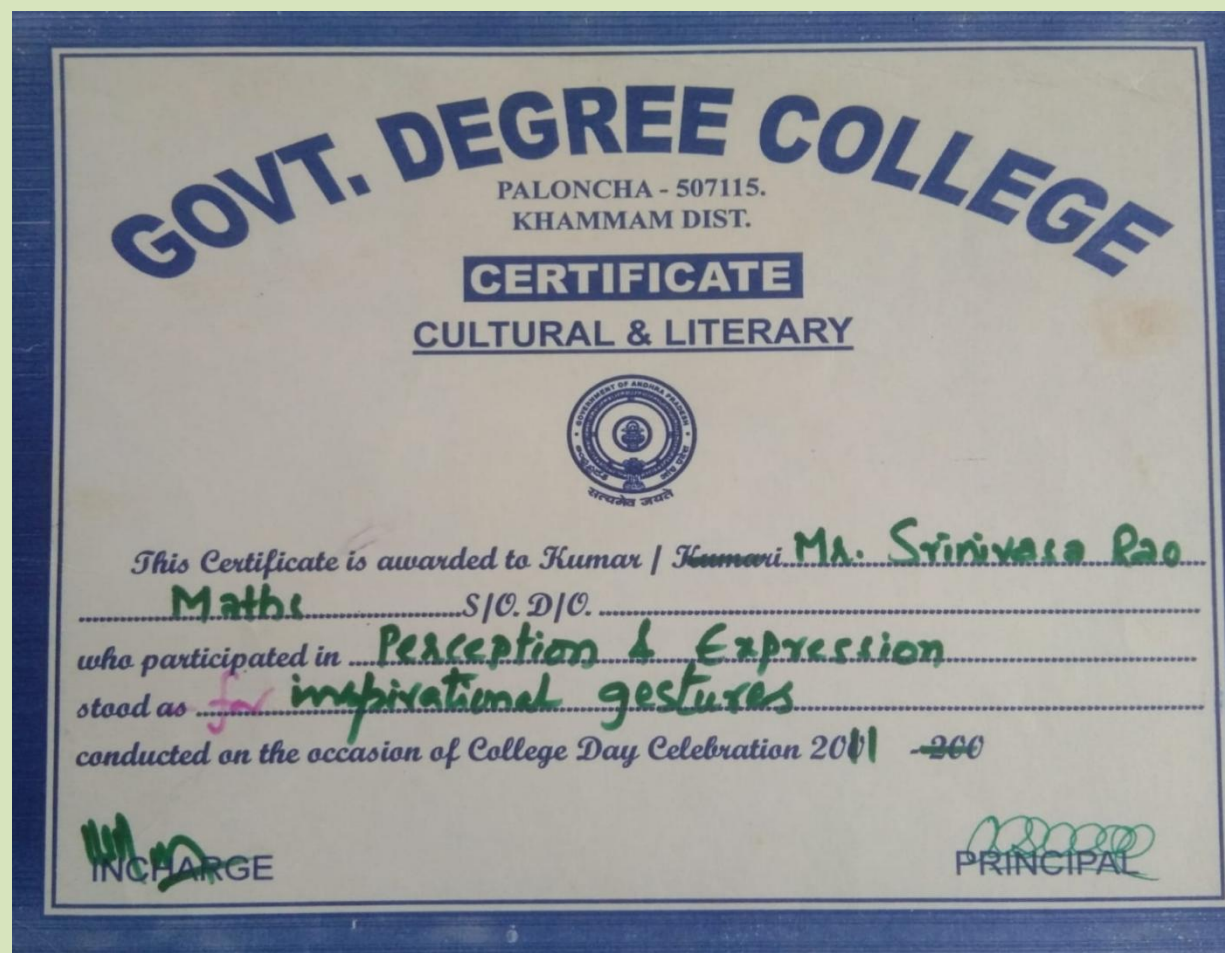# INSTITUTIONAL VALUES AND BEST PRACTICES

INSTITUTIONAL VALUES AND BEST PRACTICES

❖ **To impart the vital skills and**
    foundational knowledge of Mathematics.
❖   **To deepen the skills gained through the**
    course work.
❖   **To critically understand the society and develop**
    consciousness inorder to motivate
    them to serve the mankind.
❖   **It is an innovative initiation taken by the department**
    of Mathematics to promote a
    value-based education to the government school
    students in and around the college.
❖   **The college motivates staff & students to actively**
    participate in community service
    for the neighborhood school students.

BLOOD DONATED TO POOR PATIENTS AT GOVERNMENT HOSPITAL

CERTIFICATE OF CULTURAL & LITERARY

Using ICT Tool for Effective Teaching in Class Room 2016-17

S.No.	Date	Class and Paper Code	Title of Lecture	Number of Students Present	ICT tool used	Name of the Teacher	Resource or technique used	Web Link
1	16-8-2016	I year	DIFFERENTIAL EQUATIONS	4	PPT	P.SRINIVASA RAO		
2	26-8-2016	II YEAR	REAL ANALYSIS	9	PPT	P.SRINIVASA RAO		
3	2-9-2016	III YEAR	VECTOR CALCULUS	9	ppt	P.SRINIVASA RAO		

Using ICT Tool for Effective Teaching in Class Room 2017-18

S.No.	Date	Class and Paper Code	Title of Lecture	Number of Students Present	ICT tool used	Name of the Teacher	Resource or technique used	Web Link
1	5-9-2017	I YEAR	D.E's	4	PPT	P.SRINIVASA RAO		
2	6-9-2017	II YEAR	REAL ANALYSIS	4	PPT	P.SRINIVASA RAO		
3	7-9-2017	III YEAR	SOLID GEOMETRY	11	PPT	P.SRINIVASA RAO		
4	8-9-2017	I YEAR	D.E'S	4	PPT	P.SRINIVASA RAO		
5	11-9-2017	II YEAR	ABSTRACT ALGEBRA	4	PPT	P.SRINIVASA RAO		
6	13-9-2017	III YEAR	LINEAR ALGEBRA	11	PPT	P.SRINIVASA RAO		
7	14-9-2017	I YEAR	D.E'S	4	PPT	P.SRINIVASA RAO		
8	20-10-2017	II YEAR	REAL ANALYSIS	4	PPT	P.SRINIVASA RAO		
9	23-10-2017	III YEAR	NUMERICAL ANALYSIS	11	PPT	P.SRINIVASA RAO		

Using ICT Tool for Effective Teaching in Class Room 2018-19

| S.No.	Date	Class and Paper Code	Title of Lecture	Number of Students Present	ICT tool used	Name of the Teacher	Resource or technique used	Web Link
1	30-7-2018	I YEAR	D.E's	20	PPT	P.SRINIVASA RAO		
2	31-7-2018	II YEAR	REAL ANALYSIS	4	PPT	P.SRINIVASA RAO		
3	1-8-2018	III YEAR	SOLID GEOMETRY	5	PPT	P.SRINIVASA RAO		
4	2-8-2018	I YEAR	D.E's	18	PPT	P.SRINIVASA RAO		
5	4-8-2018	II YEAR	ABSTRACT ALGEBRA	4	PPT	P.SRINIVASA RAO		
6	7-8-2018	III YEAR	LINEAR ALGEBRA	5	PPT	P.SRINIVASA RAO		
7	10-8-2018	I YEAR	D.E's	18	PPT	P.SRINIVASA RAO		
8	13-8-2018	II YEAR	REAL ANALYSIS	4	PPT	P.SRINIVASA RAO		
9	14-8-2018	III YEAR	NUMERICAL ANALYSIS	5	PPT	P.SRINIVASA RAO		

Using ICT Tool for Effective Teaching in Class Room 2019-20

S.No.	Date	Class and Paper Code	Title of Lecture	Number of Students Present	ICT tool used	Name of the Teacher	Resource or technique used	Web Link
1	22-7-2019	I YEAR	D.E's	24	PPT	P.SRINIVASA RAO		
2	23-7-2019	II YEAR	REAL ANALYSIS	22	PPT	P.SRINIVASA RAO		
3	24-7-2019	III YEAR	SOLID GEOMETRY	05	PPT	P.SRINIVASA RAO		
4	25-7-2019	I YEAR	D.E's	26	PPT	P.SRINIVASA RAO		
5	26-7-2019	II YEAR	ABSTRACT ALGEBRA	24	PPT	P.SRINIVASA RAO		
6	27-7-2019	III YEAR	LINEAR ALGEBRA	05	PPT	P.SRINIVASA RAO		
7	31-7-2019	I YEAR	D.E's	21	PPT	P.SRINIVASA RAO		
8	1-8-2019	II YEAR	REAL ANALYSIS	18	PPT	P.SRINIVASA RAO		
9	2-8-2019	III YEAR	NUMERICAL ANALYSI	05	PPT	P.SRINIVASA RAO		

Using ICT Tool for Effective Teaching in Class Room 2020-21

S.No.	Date	Class	Title of Lecture	No. Of Students Attended	Name of the Teacher	Web Link
1	3-4-2021	I YEAR	DIFFERENTIAL EQUATIONS	24	P.SRINIVASA RAO	
2	6-4-2021	II YEAR	REAL ANALYSIS	21	P.SRINIVASA RAO	
3	7-4-2021	III YEAR	SOLID GEOMETRY	16	P.SRINIVASA RAO	
4	8-4-2021	I YEAR	DIFFERENTIAL EQUATIONS	27	P.SRINIVASA RAO	
5	9-4-2021	II YEAR	ABSTRACT ALGEBRA	23	P.SRINIVASA RAO	
6	12-4-2021	III YEAR	LINEAR ALGEBRA	18	P.SRINIVASA RAO	
7	15-4-2021	I YEAR	DIFFERENTIAL EQUATIONS	21	P.SRINIVASA RAO	
8	17-4-2021	II YEAR	REAL ANALYSIS	19	P.SRINIVASA RAO	
9	19-4-2021	III YEAR	NUMERICAL ANALYSIS	16	P.SRINIVASA RAO	

PPT & ICT TOOLS
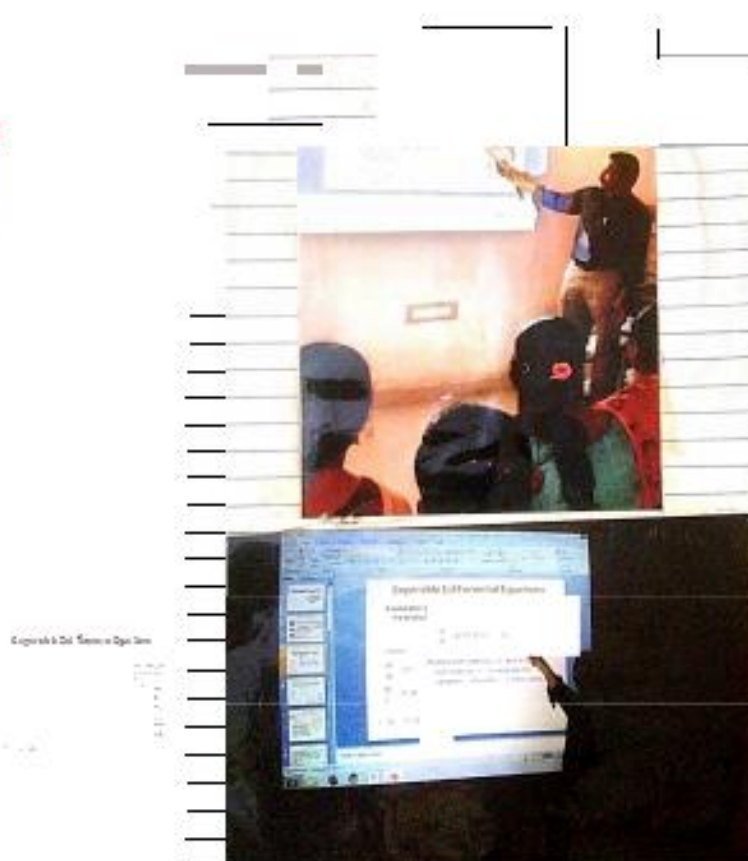
NUMERICAL ANALYSIS (FOR DEGREE CLASSES)

Example problem: Given $\sin 45° = 0.7071$, $\sin 50° = 0.7$, $\sin 55° = 0.8192$, $\sin 60° = 0.8660$ find $\sin 52°$ by using any method of interpolation.

Solution: Here

x	$45°$	$50°$	$52°$	$55°$	$60°$
$f(x)$	0.7071	0.7660	?	0.8192	0.8660

The difference table is as under: (NOTE THAT $f(x) = $)

x	$f(x)$	$\Delta f(x)$	$\delta^2 f(x)$	$\delta^3 f(x)$
45	0.7071	0.0589		
50	0.7660	0.0532	−0.0057	−0.0007
55	0.8192	0.0468	−0.0064	
60	0.8660			

By Newton's interpolation formula, we have

$$f(a+uh) = f(a) + u \cdot \Delta f(a) + \frac{u(u-1)}{2!} \delta^2 f(a) + \frac{u(u-1)(u-2)}{3!} \cdots$$

Here $a = 45$, $u = \frac{x-a}{h} = \frac{52-45}{5} = 1.4$

$$f(52°) = 0.7071 + 1.4 \times 0.0589 + \frac{(1.4)(0.4)}{2!} \times (-0.0057) + \frac{(1.4)(0.4)(-0.6)}{3!} \times (-0.0007)$$

$$f(52°) = 0.7071 + 0.08246 - 0.001596 + 0.0000$$

$$\sin 52° = 0.780032 \quad (\because f(52°) = \sin 52°)$$

S.NO.	Date	Class	PPT/ICT	No. of students attended
1	16-8-2016	B.Sc., I Year	Differential Calculus	4
2	17-8-2016	B.Sc., II Year	Real Analysis	10
3	19-8-2016	B.Sc., III Year	Solid Geometry	9
4	20-8-2016	B.Sc., I Year	Differential equations	4
5	23-8-2016	B.Sc., II Year	Abstract Algebra	12
6	26-8-2016	B.Sc., III Year	Linear Algebra	9
7	27-8-2016	B.Sc., I Year	Differential equations	4
8	1-9-2016	B.Sc., II Year	Real Analysis	12
9	2-9-2016	B.Sc., III Year	Numerical Analysis	9

2016 – 17

Lecturer

PRINCIPAL
Govt Degree College
PALONCHA - 507 115
Bhadradri Kothagudem Dt

YOUTUBE LINKS

Sl.No.	NAME OF THE LECTURER	YOUTUBE LINKS ABOUT MATHEMATICS SUBJECT CLASSES IN THE DEPARTMENT OF MATHEMATICS
1	P.SRINIVASA RAO	https://youtu.be/t371T_By3l8
2	P.SRINIVASA RAO	https://youtu.be/RrwUZ9HGyDs
3	P.SRINIVASA RAO	https://youtu.be/t371T_By3l8
4	P.SRINIVASA RAO	https://youtu.be/ErJ5NgzXDlg
5	P.SRINIVASA RAO	https://youtu.be/CPXq5-t7PvA
6	P.SRINIVASA RAO	https://youtu.be/znQ7-PvftwI
7	P.SRINIVASA RAO	https://youtu.be/YucaHtMe00o
8	P.SRINIVASA RAO	https://youtu.be/9vu-NtKtg6A

SIGNIFICANT ACHIEVEMENTS

❖ **MEMORANDUM OF WITH UNDERSTANDING**

S.NO.	DATE OF MOU	NAME	REMARKS
1	20/08/2016	Department of Maths,Government Degree college, BHADRACHALAM	
2	11/09/2017	Department of Maths,Government Degree college, MANUGURU	
3	10/08/2018	Department of Maths,SR Government Arts & Science college, KOTHAGUDEM	
4	25/07/2019	Department of Maths,Government Degree college, YELLANDU	
5	08/04/2021	Department of Maths,Government Degree college, MANUGURU	

PROFESSIONAL DEVELOPMENT PROGRAMME (OP/RC/STC/FDP/TRAINING PROGRAMME etc.,)

S.NO.	NAME OF THE TEACHER	DESIGNATION	PROGRAMME TITLE	PROGRAMME CATEGORY	ORGANIZED AND SPONSERED BY	PROGRAMME CONDUCTED DATES & DURATION
1	P.SRINIVASA RAO	LECTURER IN MATHEMATICS	NATIONAL LEVEL WEBINAR ON SKILL DEVELOPMENT	WEBINAR	DEPARTMENT OF LIBRARY SCIENCE, GDC, PALONCHA	18-5-2020
2	P.SRINIVASA RAO	LECTURER IN MATHEMATICS	E-QUIZ SERIES ABOUT ANALYSIS	QUIZ	A.P.C.MAHALAXMI COLLEGE FOR WOMEN, THOOTHUKUDI	9-6-2020
3	P.SRINIVASA RAO	LECTURER IN MATHEMATICS	NATIONAL LEVEL e-QUIZ on MATHEMATICS AND IT's APPLICATIONS	QUIZ	LORDS INSTITUTE OF ENGINEERING & TECHNOLOGY, HYDERABAD	12-6-2020
4	P.SRINIVASA RAO	LECTURER IN MATHEMATICS	ALL INDIA NATIONAL LEVEL ONLINE QUIZ ON GENERAL STUDIES	QUIZ	GOVERNMENT DEGREE COLLEGE, IBRAHIMPATNAM, R.R.DISTRICT, TELANGANA	15-6-2020
5	P.SRINIVASA RAO	LECTURER IN MATHEMATICS	NATIONAL LEVEL e-QUIZ ON MATHEMATICS	QUIZ	VIVEKANANDA COLLEGE, AGASTHEESWARAM, KANYA KUMARI DISTRICT, TAMILANADU, PIN: 629701	15-6-2020
6	P.SRINIVASA RAO	LECTURER IN MATHEMATICS	NATIONAL LEVEL ONLINE QUIZ IN MATHEMATICS & APTITUDE	QUIZ	ANDHRA LOYOLA INSTITUTE OF ENGINEERING AND TECHNOLOGY & CONDUCTED BY DEPARTMENT OF MATHEMATICS	19-6-2020
7	P.SRINIVASA RAO	LECTURER IN MATHEMATICS	ONEDAY FDP WEBINAR ON "THE EMERGING ONLINE EDUCATION, POST COVID-19 ROLE OF TEACHERS AND STUDENTS (IQAC CELL)	FDP WEBINAR	CONDUCTED BY IQAC CELL, SRI DURGA MALLESWARA SIDDHARTHA MAHILA KALASALA, VIJAYAWADA	19-6-2020
8	P.SRINIVASA RAO	LECTURER IN MATHEMATICS	ONLINE MATHEMATICS QUIZ IN JUNE 2020	QUIZ	MAHATMA JYOTHIBA PHULE	19-6-2020

					TELANGANA BACKWARD CLASSES WELFARE RESIDENTIAL DEGREE COLLEGE FOR WOMEN, WARGAL, SIDDIPET DISTRICT	
9	P.SRINIVA SA RAO	LECTURER IN MATHEMATICS	ONLINE APTITUDE QUIZ	QUIZ	PLACEMENT AND NSEED CELL, NANDHA ARTS AND SCIENCE COLLEGE, ERODE-52, TAMILNADU, INDIA	19-6-2020
10	P.SRINIVA SA RAO	LECTURER IN MATHEMATICS	ONEDAY NATIONAL WEBINAR ON "YOGA TRAINING THE PRACTICAL SESSION" CONDUCTED ON THE EVE OF INTERNATIONAL YOGA DAY	WEBINAR	GOVERNMENT DEGREE COLLEGE, YELLANDU, BHADRADRI KOTHAGUDEM DISTRICT	21-6-2020
11	P.SRINIVA SA RAO	LECTURER IN MATHEMATICS	ONLINE QUIZ COMPETITION ON "ENGINEERING MATHEMATICS" (ORGANISED BY THE DEPARTMENT OF HUMANITIES & MATHEMATICS)	QUIZ	G.NARAYANAMM A INSTITUTE OF TECHNOLOGY & SCIENCE (FOR WOMEN), SHAIKPET, HYDERABAD-500104	JUNE 2020
12	P.SRINIVA SA RAO	LECTURER IN MATHEMATICS	ONLINE NATIONAL LEVEL WEBINAR ON INTERNATIONAL YOGA DAY (ORGANISED BY EKBHARATH SHRESHTHA BHARAT (ESEB) CLUB & NSS UNIT	WEBINAR	GOVERNMENT DEGREE COLLEGE, PALONCHA	21-6-2020
13	P.SRINIVA SA RAO	LECTURER IN MATHEMATICS	ONLINE QUIZ ON "NAAC AWARENESS QUIZ-2020"	QUIZ	MAHABUBNAGAR VIDYA SAMITHI (M.V.S.) GOVERNMENT ARTS & SCIENCE COLLEGE (A), CHRISTNAPALLY, MAHABUBNAGAR , PIN: 509001, TELANGANA	JUNE 2020
14	P.SRINIVA SA RAO	LECTURER IN MATHEMATICS	NATIONAL LEVEL ONLINE FDP ON "DIGITAL SKILLS FOR SMART TEACHING"	FDP	RAJA DORAISINGAM GOVERNMENT ARTS COLLEGE, SIVAGANGA-630561, TAMILNADU	22-6-2020 TO 23-6-2020
15	P.SRINIVA SA RAO	LECTURER IN MATHEMATICS	"WEBINAR ON APPLICATIONS OF FUZZY MATHEMATICS"(ORGANI	WEBINAR	POPE's COLLEGE (A), SAWYERPURAM	22-6-2020

			SED BY THE DEPARTMENT OF MATHEMATICS)			
16	P.SRINIVA SA RAO	LECTURER IN MATHEMATICS	E-QUIZ ON HIGHER MATHEMATICS (ORGANISED BY DEPARTMENT OF MATHEMATICS)	QUIZ	PARVATHY's ARTS & SCIENCE COLLEGE, WISDOM CITY MADURAI MAIN ROAD, DINDIGUL-2	24-6-2020
17	P.SRINIVA SA RAO	LECTURER IN MATHEMATICS	"DIFFERENTIAL TRANSFORMS AND SERIES SOLUTIONS OF NON-DARCY MOMENTUM EQUATION" (CONDUCTED BY DEPARTMENT OF MATHEMATICS, KPRIET)	WEBINAR	KPR INSTITUTE OF ENGINEERING AND TECHNOLOGY (A), AVINASHI ROAD, ARASUR, COIMBATORE-641407	25-6-2020 TO 26-6-2020
18	P.SRINIVA SA RAO	LECTURER IN MATHEMATICS	ONLINE QUIZ IN GROUP THEORY (ORGANISED BY DEPARTMENT OF MATHEMATICS)	QUIZ	SR & BGNR GOVERNMENT ARTS & SCIENCE COLLEGE (A), KHAMMAM	26-6-2020
19	P.SRINIVA SA RAO	LECTURER IN MATHEMATICS	ONLINE NATIONAL WEBINAR ON MATHEMATICAL APPLICATIONS ON DIFFERENTIAL EQUATIONS JOINTLY ORGANISED BY DEPT. OF MATHS (UG & PG)	WEBINAR	SIR C.R.REDDY COLLEGE, ELURU, ANDHRA PRADESH	26-6-2020
20	P.SRINIVA SA RAO	LECTURER IN MATHEMATICS	TWO WEEK NATIONAL LEVEL ONLINE FACULTY DEVELOPMENT PROGRAMME (FDP) ON SKILL DEVELOPMENT AND COMEPTENCY ENHANCEMENT FOR COLLEGE TEACHERS	FDP	GOVERNMENT DEGREE COLLEGE, PARKAL, WARANGAL DISTRICT, TELANGANA	17-6-2020 TO 30-6-2020
21	P.SRINIVA SA RAO	LECTURER IN MATHEMATICS	ONLINE WEBINAR ON "MATHEMATICA & APPLICATIONS OF MATHEMATICS" (ORGANISED BY DEPARTMENT OF APPLIED SCIENCES, MATHS & HUMANITIES)	WEBINAR	MAHATMA EDUCATION SOCIETY's PILLAI COLLEGE OF ENGINEERING, DVK.M.VASUDEV AN PILLAI CAMPUS, SECTOR-16, NEW PANVEL-410206	27-6-2020 TO 29-6-2020
22	P.SRINIVA SA RAO	LECTURER IN MATHEMATICS	ONLINE QUIZ PROGRAMME ON "NATIONAL LEVEL e-QUIZ ON MODERN INDIAN HISTORY"(ORGANISED BY DEPARTMENT OF HISTORY)	QUIZ	SR & BGNR GOVERNMENT ARTS & SCIENCE COLLEGE (A), KHAMMAM	5-7-2020
23	P.SRINIVA	LECTURER IN	ONLINE GENERAL	QUIZ	GIRRAJ	8-7-

	SA RAO	MATHEMATICS	MATHEMATICS QUIZ (ORGANISED BY DEPARTMENT OF MATHEMATICS)		GOVERNMENT COLLEGE (A), NIZAMABAD	2020
24	P.SRINIVA SA RAO	LECTURER IN MATHEMATICS	NATIONAL LEVEL e-QUIZ COMPETITION ON MATHEMATICS (ORGANISED BY DEPARTMENT OF MATHEMATICS)	QUIZ	NTR GOVERNMENT DEGREE COLLEGE (W), MAHABUBNAGAR	8-7-2020
25	P.SRINIVA SA RAO	LECTURER IN MATHEMATICS	"ONE WEEK ONLINE INTERNATIONAL FDP ON ADVANCED MATERIALS & MATHEMATICAL TOOLS"(ORGANISED BY FIRST YEAR ENGINEERING DEPARTMENT)	FDP	AMAR SEVA MANDAL's GOVINDRAO WANJARI COLLEGE OF ENGINEERING & TECHNOLOGY, NAGPUR	10-7-2020 TO 14-7-2020
26	P.SRINIVA SA RAO	LECTURER IN MATHEMATICS	NATIONAL LEVEL ONLINE e-QUIZ (ORGANISED BY DEPARTMENT OF MATHEMATICS, GDC (SCIENCES)	QUIZ	GOVT. DEGREE COLLEGE (SCIENCES), NAGARKURNOOL DISTRICT PIN: 509209	11-7-2020
27	P.SRINIVA SA RAO	LECTURER IN MATHEMATICS	WEBINAR ON "EFFECTIVE LIFE MANAGEMENT THROUGH YOGA & LIFE SKILLS IN THE CHANGING ENVIRONMENT (ORGANISED BY DEPT. OF ZOOLOGY)	WEBINAR	GOVERNMENT DEGREE COLLEGE, BELLAMPALLY, MANCHERIAL DISTRICT	15-7-2020
28	P.SRINIVA SA RAO	LECTURER IN MATHEMATICS	FIVE DAYS FDP ON ICT TOOLS	FDP	PRIYADARSHINI DEGREE & PG COLLEGE, NEHRU NAGAR, KHAMMAM	23-7-2020 TO 27-7-2020
29	P.SRINIVA SA RAO	LECTURER IN MATHEMATICS	NATIONAL LEVEL QUIZ ON ARITHMETIC (ORGANISED BY DEPARTMENT OF MATHEMATICS)	QUIZ	GOVERNMENT DEGREE COLLEGE, JAMMIKUNTA, KARIMNAGAR DISTRICT	1-8-2020 TO 12-8-2020
30	P.SRINIVA SA RAO	LECTURER IN MATHEMATICS	ONLINE NATIONAL LEVEL e-QUIZ ON MATHEMATICS (ORGANISED BY DEPARTMENT OF MATHEMATICS)	QUIZ	GOVERNMENT DEGREE COLLEGE (SCIENCES), NAGARKURNOOL	10-8-2020 TO 17-8-2020

CAMPAIGNING

HARITHA HARAM PROGRAMME

FUTURE PLANS:

❖ To strengthen the department it is proposed to apply for sanction of well equipped laboratory ,well established Departmental Library and supervisory ship.

❖ To develop interdisciplinary add on courses.

❖ To intensify Extracurricular activity in the department.

❖ Participation in Institutional Social Responsibility   and Extension activities.

❖ For quick and accurate internal evaluation of the student performance.

Thank You!