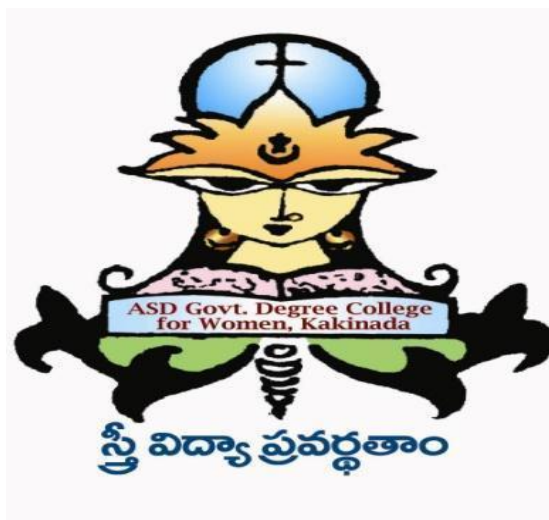# A.S.D. Government Degree College for Women (A),Kakinada

DEPARTMENT OF MATHEMATICS

2022-23

COURSE OUTCOMES

A.S.D.GOVT.DEGREE COLLEGE FOR WOMEN (A)

Department of Mathematics

PROGRAMME:B.Sc(MPC,MPCs,MSCs)

2022-23

COURSE OUTCOMES

Paper : l

Course: Differential Equations

Course Outcomes:

1. Slove linear differential equations

2. Convert non exact homogeneous equations to exact differential equations by using integrating factors

3. Know the methods of finding solutions of differential equations of the first order but not of the first degree

4. Slove higher order linear differential equations both homogeneous and non homogeneous with constant coefficients

5. Understand the concept and apply appropriate methods for solving differential equations

Paper :II

Course:THREE DIMENSIONAL ANALYTICAL SOLID GEOMETRY

Course Outcomes:

1. Understand the concept of planes

2. Analyze the right lines ,sphere and cones

3. Understand the properties of planes ,lines ,spheres and cones

4. Express the problems geometrically and then to get the solution

Paper :III

Course: ABSTRACT ALGEBRA

Course Outcomes:

1. Acquire the basic knowledge and structure of groups ,subgroups and cyclicgroups

2. Get the significance of the notation of a normal subgroups

3. Study the homomorphism and isomorphism with applications

4. Get the behavior of permutations and operations on them

5. Undestanding the ring theory concepts with the help of knowledge in group theory and to prove the theorems

6. Understand the applications of ring theory in various fields

Course: ANALYTICAL SKILLS

Course Outcomes:

1. Understand the basic concepts of arithmetic ability, quantitative ability, logical reasoning,business computations and data interpretation and obtain the associated skills.

2. Acquire competency in the use of verbal reasoning.

3. Apply the skills and competencies acquired in the related areas

4. Solve problems pertaining to quantitative ability, logical reasoning and verbal ability insideand outside the campus.

Paper :IV

Course: REAL ANALSIS

Course Outcomes:

1. Get clear idea about the real numbers and real valued functions

2. Obtain the skills of analyzing the concepts and applying appropriate methods for testing convergence of a sequence / series

3. Test the continuity and differentiability and Riemann integration of a function

4. Know the geometrical interetation of mean value theorems

Paper :V

Course: LINEAR ALGEBRA

Course Outcomes:

1. Undestand the concepts of vector space , subspace ,basis , dimension and their properties

2. Understand the concepts of linear transformations and their properties

3. Apply Cayley –Hamilton theorem to problems for finding the inverse of a matrix and higher powers of matrices without using routine method

4. Learn the properties of inner product spaces and determine orthogonality in inner product spaces

Paper :VIA

Course: NUMERICAL METHODS

Course Outcomes:

1. Undstand various numerical methods that are used to obtain approximate solutions

2. Undstand various finite difference operators and interpolation methods

3. Work out numerical differentiation and integration whenever and wherevers analytical methods are not applicable

4. Find numerical solutions of ordinary differential equations by using various numerical methods

5. Analyze and evaluate the accuracy of numerical methods

Paper :VIB

Course: MATHEMATICS SPECIAL FUNCTIONS

Course Outcomes:

1. Undstand the Beta and Gamma functions , their properties and relation between these two functions , understand the orthogonal properties of chebyshev polynomials and recurrence relations

2. Find power series solutions of ordinary differential equations

3. Solve Hermite equation and write the Hermite polynomial of order n , also find the generating function for Hermite Polynomials , study the orthogonal properties of Hermite polynomial and recurrence relation

4. Slove Legendre equation and write the Legendre equation of first kind , also find the generating function for Legendry Polynomials understand the orthogonal properties of Legendre Polynomials

6. Solve Bessel equation and write the Bessel equation of first kind of order n , also find the generating function for Bessel function understand the orthogonal properties of Bessel equation