South Calcutta Girls' College

Department of Mathematics

MTMG

Semester - 1

1. COURSE OUTCOME

New syllabus for GECC1

A.UNIT 1: ALGEBRA-1

Complex number

Polynomial

Matrix

Contact hours: 5 hrs/week

Tutorial:1hr/week

B.UNIT 2: DIFFERENTIAL CALCULUS-1

Rational numbers

Real valued function

Derivative

Successive derivative

Function of two and three variables

Application of differential calculus

Contact hours: 5hrs/week

Tutorial: 1hr/week

C.UNIT 3:DIFFERENTIAL EQUATION 1

Order and degree of ODE

First and second order differential equation

D.UNIT 4:COORDINATE GEOMETRY

Transformation of axes

Pair of straight line s

Polar equation

Sphere

General equation of second degree

PROGRAMME OUTCOME

PO1:Complex numbers have some useful mathematical properties that actually make your life easier when you start modelling systems with sinusoidal input like electric circuits.

PO2:Polynomial is an important part of language of math.

PO3:Matrix is a useful way to represent manipulate and study linear map.

PO4:Derivative is the fundamental tool of calculus.The derivative if a function of a real variable measures the sensitivity to change of the function value with respect to a change in its arguments.

PO5: The function derivatives can be used to search for the maxima minima.

PO6:Calculus is study of how things change.

PO7:Differential equation has a remarkable ability to predict the world around us.It is usefull for every sector.

PO8:Co ordinate geometry is needed for trigonometry calculus and many other sector.

PROGRAMME SPECIFIC OUTCOME

POS1:The course will prepare th students for higher studies,research and compitative exam.

POS2: It will provide the students a basic understanding of math.

POS3:The students will have extensive theoretical knowledge covering all major field.

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Semester - 2

1.COURSE OUTCOME:

New syllabus for GECC2

A.UNIT 1: Differential calculus

Sequence

Infinite series

Real valued function

Maxima minima function

B.UNIT 2: Differential equation

Homogeneous

Order and degree of pde

Contact class:5hrs/week

Tutorial:1hr /week

C.UNIT 3:Vector Algebra

Addition and multipicaton

Volume of tetrahedrone

Contact class : 5hrs/week

Tutorial: 1hr/week

D.Discrete mathematics

Integers

Congruence relation

Application of congruence

Congruence class

Boolean algebra

Contact hour: 5hrs/week

PROGRAMME OUTCOME:

PO1:Sequence and series are important of real numbrs.

PO2:The graphical stracture of a function is defined by maxima minim. It is used for industry purpose.

PO3:Differential equation is also important for every branch.

PO4:Vector analysis a branch of math where describe object acting under the influence of an external force.

PO5:Discrete math is the study of math structure that are fundamentally discrete rather continuous.

PROGRAMME SPECIFIC OUTCOME:

POS1: The course will prepare the students for higher studies,research and compitative exam.

POS2: It will provide the student basic knowledge of math.

POS3: The student will have extensive theoretical knowledge covering all major field of math.

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Semester - 3

1.COURSE OUTCOME:

New syllabus for GECC3

A.UNIT 1: INTEGRAL calculus

Definite integral

Reduction formula

Improper integration

Double integration

B.UNIT 2: Numerical Methods

Errors

Interpolation

Numerical integration

Solution of numerical equation

Contact class:5hrs/week

Tutorial:1hr /week

C.UNIT 3:Linear programming

Slack and surplus variable

Feasible solution of convex set

Fundamental theorem of lpp

Contact class : 5hrs/week

Tutorial: 1hr/week

PROGRAMME OUTCOME:

PO1:integration is biggest tool of math for solving problems.

PO2:N umerical methods is an programming language.

PO3:it It is needed for engineering problem.

PO4:lpp is used for obtaing the most optinal solution for a problem.

PO5:we formulate our real life problem into a mathematical model.

PROGRAMME SPECIFIC OUTCOME:

POS1: The course will prepare the students for higher studies,research and compitative exam.

POS2: It will provide the student basic knowledge of math.

POS3: The student will have extensive theoretical knowledge covering all major field of math.

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Semester - 4

1.COURSE OUTCOME:

New syllabus for GECC4

A.UNIT 1: Algebra

Group theory

Ring field

Vector space

Real quadratic form

Eigen vector

B.UNIT 2: Computer Science and programming

Computer generation

Binary to decimal

Programming language

Algorithm and flow chart

Contact class:5hrs/week

Tutorial:1hr /week

C.UNIT 3:Probability and statistics

Elements of probability theory

Probability distribution

Statistical method

Sampling theory

Contact class : 5hrs/week

Tutorial: 1hr/week

PROGRAMME OUTCOME:

PO1:Algebra is very important part of math.

PO2:compuer science is very useful for all of us.

PO3:probability and statistics is useful for industry purpose.

PROGRAMME SPECIFIC OUTCOME:

POS1: The course will prepare the students for higher studies,research and compitative exam.

POS2: It will provide the student basic knowledge of math.

POS3: The student will have extensive theoretical knowledge covering all major field of math.