

## EXPERT DETAILS

**MR. SUBRATA MAHANTY**  
ASSISTANT PROFESSOR  
MATHEMATICS

**MRS. DEBJANI CHATTERJEE**  
ASSISTANT PROFESSOR  
MATHEMATICS

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**MR. MRINMOY MAITY**  
ASSISTANT PROFESSOR  
MATHEMATICS

**MR. SANJOY HALDER**  
ASSISTANT PROFESSOR  
MATHEMATICS

## COURSE IS FOR

B.TECH  
B.Sc.  
B.A  
DIPLOMA  
ITI  
HIGHER SECONDARY (Class XI & XII)

## REGISTRATION FEES

**Rs. 200/-**

## COURSE HIGHLIGHTS :

- *The essential uses of geometry for studies of curve structure.*
- *Understand the concept of Fibonacci series & golden ratio in nature, architecture, finance, art, and various scientific fields through real life examples.*
- *Application of data measurement to calculate different types of financial analysis, growth rate, environmental data analysis & other daily life problems.*
- *The real-life application of probability in various field like weather forecast, match win prediction, etc.*
- *This course focuses on developing the theoretical tools and logical reasoning required for higher mathematics, advanced physics, engineering mathematics, etc.*
- *Understand the concept of algebraic operations that will be beneficial in their various entrance test & competitive exams.*

## CONTACT DETAILS :

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## REGISTRATION

Scan the QR Code for Registration



[www.icampus.setgoi.ac.in](http://www.icampus.setgoi.ac.in)

# SHORT TERM CERTIFICATE COURSE

# ABSTRACT MATHEMATICS



**SANAKA EDUCATIONAL  
TRUST'S GROUP  
OF INSTITUTIONS**

DURGAPUR

A UNIT OF SANAKA EDUCATIONAL TRUST

MALANDIGHI, DURGAPUR - 713212

DEPARTMENT OF  
BASIC SCIENCE AND HUMANITIES



## Day 1

### Inaugural Session

#### SET :

Describe the set using Venn-Diagrams, properties of set operation.

#### RELATION :

Equivalence relation & Equivalence class.

#### MAPPING :

Domain, range, graph, Bijection mapping,

## Day 2

#### FUNCTION :

Identification of Functions (graphically).

Different types of functions

Polynomial function

Exponential function

Logarithmic function

Trigonometric function, etc.

#### COMBINATION :

Real life Application of permutation Combination.

Combinations with repetition.

## Day 3

#### NUMBER THEORY :

Divisibility Test – Introduce divisibility rules for numbers 2, 3, 5, 10, etc.

Used to simplify fractions, factor numbers, and find least common multiples (LCMs) and greatest common divisors (GCDs)

#### Concept of Prime Number.

Fundamental Theorem of Arithmetic.

Prime Factorization

#### PROOFS :

Different Types of Proof Used in Mathematics.

Direct Proof

Proof by Contradiction

Proof by Contrapositive

Proof by Mathematical Induction

Geometric Proofs

## Day 4

#### PROBABILITY :

Key concepts of probability

Conditional probability

Bayes' theorem.

#### STATISTICS :

Introduction to Measurement by Statistical Tools.

#### SEQUENCE & SERIES :

Brief Discussion A.M, G.M & H.M.

Fibonacci series & golden ratio

## Day 5

**Quiz/test based on the acquired knowledge from the previous classes.**

**Valedictory session.**