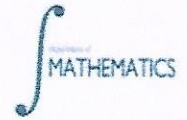




Annai Hajira Women's College
Melapalayam, Tirumelveli-627005



DEPARTMENT OF MATHEMATICS

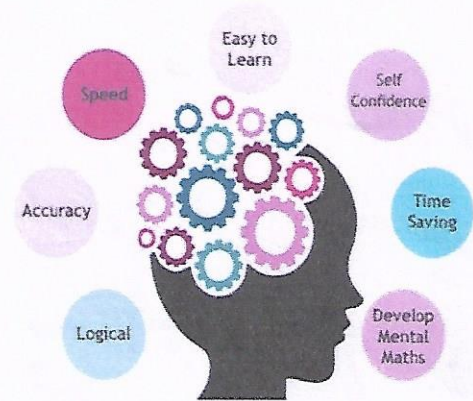
Offers

CERTIFICATE COURSE FOR THE ACADEMIC YEAR 2022-2023

❖ *Fundamentals Of Vedic Mathematics*

❖ *Numerical Ability*

❖ *Fundamentals Of Statistics – I*



DETAILS OF THE COURSE

Duration : One year

Eligibility : All Programme Students

Scope :

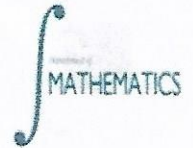
- Students can work 10 to 15 times faster than conventional Maths
- It eases the toughness of Mathematics
- Boosts the brain power



Annai Hajira Women's College

Melapalayam, Tirunelveli – 05

(A Unit of As-Sathiq Educational Society)



CERTIFICATE COURSE 2022-2023

About Course

The course focuses the students to master learn the art of quick maths, understand and apply superfast methods of calculation, useful for all branches like Math-Arithmetic, Algebra, Geometry, Trigonometry etc.

Pedagogical Outline

The duration of the course is one year which incorporates theory classes, assignments, quizzes and internal tests.

Eligibility

All programme students are eligible to enroll for this course.

Scope of the Course

With the knowledge of the Course, students can work 10 to 15 times faster than conventional maths. This course eases the toughness of mathematics and boosts the brain power. Students can do any type of complex and critical multiplication or division in an easier way. Opting for Mathematics as a career option is a positive move, as it opens up wide employment opportunities in various fields.

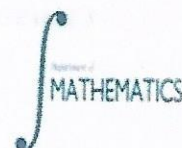
Certificate Course in FUNDAMENTALS OF VEDIC MATHEMATICS		
Paper – I	Course Code: 2022FVM11	
Hrs: 30	Duration :1 year	Credits: 2

Course Objectives

- Cultivates an interest in numbers and eliminates the math-phobia
- Provide tricks that help in solving mathematical calculations quite easily.
- Develops creativity and confidence, increase their speed and accuracy
- Sharpens students mind, increase mental agility and intelligence



Annai Hajira Women's College
Melapalayam, Tirunelveli - 05
(A Unit of As-Sathiq Educational Society)



CERTIFICATE COURSE 2022-2023

Department of Mathematics

offers

Certificate Course in FUNDAMENTALS OF VEDIC MATHEMATICS

Course Outcome

CO No.	<i>Expected Course Outcomes</i> <i>Upon completion of this course, the students will be able to:</i>	Cognitive Level
1	Understand the concept of addition using completing the whole from left to right	R / U / Ap
2	Understand the concept of subtraction using completing the whole from left to right	R / U / Ap
3	Manage to solve the multiplication using vertically and crosswise and one more than the previous one method and demonstrate multiplication by 11	R / U / Ap
4	Understand the concept of division by using straight division	R / U / Ap
5	Find squaring and square root	R / U / Ap

Cognitive Level: R-Remember; U-Understanding; Ap-Apply; An-Analyze; E-Evaluate; C-Create

Course Content

Unit I :

Addition-Completing the whole-Addition from left to right

Unit II:

Subtraction-Completing the whole-Subtraction from left to right

Unit III:

Base Method-Sub Base Method- Multiplication by 11

Unit IV:

Special Methods of Division-Straight Division

Unit V:

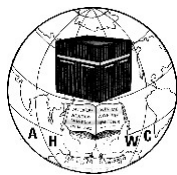
Squaring and square roots

Text Book:

“Fundamentals and applications of Vedic mathematics”, State Council of Educational Research & Training, New Delhi and printed at Educational Stores, S-5, Bsr. Road Ind. Area, Ghaziabad (U.P.), 2014.

Reference Books:

1. Sri Bharati KrsnaTirthaji, “Vedic Mathematics”, published by Motilal Banarsidass, 1965.
2. Williams K.R. “Discover Vedic Mathematics.” Vedic Mathematics Research Group, 1984.
3. Williams K.R. and M. Gaskell “The Cosmic Calculator”. Motilal Banarsidass, 2002.
4. Nicholas A.P., Williams, J. Pickles. “Vertically and Crosswise”. Inspiration Books, 1984.



Annai Hajira Women's College
Melapalayam, Tirunelveli – 05
(A Unit of As-Sathiq Educational Society)
(Affiliated to Manonmaniam Sundaranar University)



CERTIFICATE COURSE 2022-2023

About Course

The "Numerical Ability" course is designed to improve students' mathematical and quantitative skills. It provides a structured approach to solving numerical problems encountered in daily life, academics, and a wide range of professions. It is focused on numerical ability typically aims to enhance individuals' mathematical skills and their capacity to apply these skills in various contexts.

Pedagogical Outline

The duration of the course is one year which incorporates theory classes, assignments, quizzes and internal test.

Eligibility

All programme students are eligible to enroll for this course.

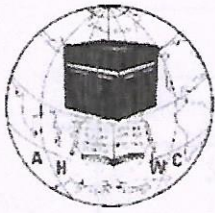
Scope of the Course

The scope of numerical ability skills is extensive and applicable in various academic, professional, and real-life contexts. Mastering numerical ability opens doors to numerous opportunities and equips individuals with essential skills for success in diverse fields.

Certificate Course in NUMERICAL ABILITY		
Paper – I	Course Code: 2022NA12	
Hrs: 30	Duration :1 year	Credits: 2

Course Objectives

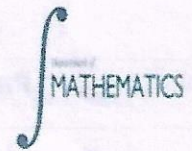
- Improving Basic Mathematical Proficiency
- Enhancing Problem-Solving Skills
- Real-World Applications
- Cultivating Mathematical Confidence



Annai Hajira Women's College

Melapalayam, Tirunelveli - 05

(A Unit of As-Sathiq Educational Society)



CERTIFICATE COURSE 2022-2023

Department of Mathematics

offers

Certificate Course in NUMERICAL ABILITY

Course Outcome

CO No.	<i>Expected Course Outcomes</i> <i>Upon completion of this course, the students will be able to:</i>	Cognitive Level
1	Determine square root and cube root find averages and interpret simplification	R / U / Ap
2	Solve problems on ages	U / Ap
3	Determine heights and distance	U / Ap
4	Analyse and solve the problems based on simple and compound interest	U / Ap
5	Apply Short tricks on solving time and work problems	U / Ap

Cognitive Level: R-Remember; U-Understanding; Ap-Apply; An-Analyze; E-Evaluate; C-Create

Certificate Course in NUMERICAL ABILITY		
Paper – II	Course Code: 2022NA12	
Hrs: 30	Duration : 1 year	Credits: 2

Course Objectives

- To learn the techniques for solving aptitude problems.
- To enable the students prepare themselves for various competitive examinations.
- To find out how fast arrive at the correct answer.

Course Content

Unit-I

Square root and Cube root, simplification, averages

Unit-II

Problems on ages

Unit-III

Heights and Distances

Unit- IV

Simple Interest and Compound Interest

Unit-V

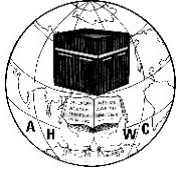
Time and Work

Text Book :

1. R.S. Agarwal – Objective Arithmetic, Published by S. Chand & Co Ltd. Edition (2018)

Books for Reference:

- R.S. Agarwal, Arithmetic Subjective and Objective, Published by S. Chand and Co Ltd Revised Edition
- S.P. Gupta & P.K. Gupta, Quantitative Aptitude , Published by Sultan Chand & Sons (2007)



Annai Hajira Women's College
Melapalayam, Tirunelveli – 05
(A Unit of As-Sathiq Educational Society)
(Affiliated to Manonmaniam Sundaranar University)



CERTIFICATE COURSE 2022-2023

About Course

This course focuses a strong foundation in statistics, enabling students to further explore advanced topics and applications in various fields, including economics, psychology, biology, and more. It is an essential skill for those who wish to be data-savvy and make data-driven decisions in their careers.

Pedagogical Outline

The duration of the course is one year which incorporates theory classes, assignments, quizzes and internal test.

Eligibility

All programme students are eligible to enroll for this course.

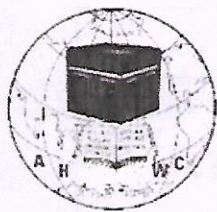
Scope of the Course

The scope of the fundamentals of statistics is continually expanding as data collection and analysis become more critical in various sectors. Understanding statistics is crucial in today's data-driven world, and it plays a significant role in decision-making, research, and problem-solving. Proficiency in statistics provides valuable skills that can open doors to a wide range of career opportunities and make individuals more effective in their decision-making processes, research endeavors, and problem-solving tasks.

Certificate Course in FUNDAMENTALS OF STATISTICS -I		
Paper – I	Course Code: 2022FS13	
Hrs: 30	Duration :1 year	Credits: 2

Course Objectives

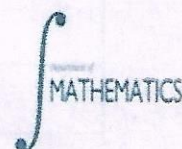
- **Understanding Statistical Concepts**
- **Applications in Real Life**
- **Critical Thinking and Data Interpretation**
- **Practical Problem-Solving**



Annai Hajira Women's College

Melapalayam, Tirunelveli - 05

(A Unit of As-Sathiq Educational Society)



CERTIFICATE COURSE 2022-2023

Department of Mathematics

offers

Certificate Course in FUNDAMENTALS OF STATISTICS – I

Course Outcome

CO No.	<i>Expected Course Outcomes</i> <i>Upon completion of this course, the students will be able to:</i>	Cognitive Level
1	Construction of pie chart and bar chart by analysing the data	U / An / C
2	Find mean , median and mode	U / Ap/E
3	Find standard deviation and variance	U / Ap/E
4	Interpret correlation and to solve rank correlation problems	U / Ap/An/E
5	To find solution for regressive equations	U / Ap/An/E

Cognitive Level: R-Remember; U-Understanding; Ap-Apply; An-Analyze; E-Evaluate; C-Create

Certificate Course in FUNDAMENTALS OF STATISTICS – I		
Paper – III	Course Code: 2022FS13	
Hrs: 30	Duration : 1 year	Credits: 2

Course Objectives

- To introduce the new concept Measures of central tendency to other major students.
- To study about correlation, regression and to solve the simple problems.

Course Content

Unit – 1:

Classification of data – Bar Diagram – Pie chart.

Unit – 2:

Measures of central tendency: Mean, median, mode (with frequency).

Unit – 3:

Measures of dispersion: Range – standard deviation, Variance – Quartile deviation.

Unit – 4:

Correlation – Rank correlation (Problems only)

Unit – 5:

Regression equations (Problems only)

Text Book:

Dr. S. Arumugam, A.Thangapandilssac- Statistics, New Gamma Publishing House, Palayamkottai. (2016)

Books for Reference:

- S. P. Gupta - Elementary Statistical Methods, Sultan Chand & Sons, (2017).
- T. Veerarajan Fundamentals of mathematical Statistics, Yes Dee Publishing Pvt, Ltd.. (2017)