Syllabus and Curriculum – Add on Course – VEDIC MATHEMATICS

Objective

Introduce the contributions on Indian mathematicians with special focus to Kerala School of Mathematics and equip students to perform calculations and solve problems either mentally or with pencil and paper using the easy and quick techniques of the Vedic system.

Duration 30 Hrs   - 6 Days of 5 hrs each

Course Fee : Rs: 1000/student

Vedic Arithmetic:

1. **History of Indian Mathematics**

    <u>Contributions</u> of following three mathematicians
    Aryabhat(fifth century), Brahmagupta, Mahaviracharya Bhascaracharya,Madhava, Neelakanda Somayajee, Jeyshtadeva

    Introduction to Vedic Mathematics by Bharati Krishna Thirthaji

2.Addition and Subtraction

   1 Addition using *parama mithram*
   1. Subtraction using Nikhilam sutra
   2. Subtraction general methods
   3. Combined addition and subtraction using Vinculum

3. **Multiplication:**
   (i) Urdhwatiryakabhyam-Vertically and cross wise- method
   (ii) Nikhilam method, use of Viniculum
   (iii) Anurupyena methods
   (iv) Special cases- Ekadhikena Purvena, Series of 9, 1 etc

4. **Division** (up to three digits)
   (i) Nikhilam method
   (ii) Paravarta yojayet method
   (iii) Dwajank –Flag digit method

5.Divisibility

   (i) Osculation method
   (ii) Duplex method

6. **Powers** up to three digits
    (i) Squares and square roots
   (ii) Cubes and cube roots

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Part 2: Vedic Algebra:

1. **Multiplication** (Two variables only)
   (i) Urdhwatiryakabhyam method
  (ii) Gunit Samucchaya

2. **Division** (one variable, up to third degree)
   (i) Paravarta Yojayet method
  (ii) checking by Beejank method
 (iii) GCD and LCM

3. **Factorisation**
  (i) Anurupyen method
  (ii) Solving the equations

Evaluation:

Internal Assessment (through unit tests)   **20 marls**
Final examination: **80 marks**

Admission: Students having maths background in +2 can join the course