

**The Kelkar Education Trust's**  
**V. G. Vaze College of Arts, Science, and Commerce (Autonomous)**

<b>B. Sc (Information Technology)</b>		<b>Semester – I</b>	
<b>Course Name: Ancient Vedic Mathematics</b>		<b>Course Code: VGVUIKS106</b>	
<b>Periods per week (1 Period is 60 minutes)</b>		<b>2</b>	
<b>Credits</b>		<b>2</b>	
		<b>Hours</b>	<b>Marks</b>
<b>Evaluation System</b>	<b>Theory Examination</b>	<b>02</b>	<b>60</b>
	<b>Internal</b>		<b>40</b>

**Course Objective**

To make learner

1. Enhance computation skills in students through Vedic Mathematics
2. Develop logical and analytical thinking
3. Promote joyful learning of mathematics
4. Discuss the rich heritage of mathematical temper of Ancient India.
5. Foster love for math's and remove its fear through Vedic Mathematics

<b>Unit</b>	<b>Details</b>	<b>Lectures</b>
<b>I</b>	<p><b>High Speed Addition, Subtraction, Miracle Multiplication :</b>  <b>Vedic Maths:</b> History of Vedic Maths and its Features  <b>Vedic Maths formulae:</b> Sutras and Upsutras  <b>Addition in Vedic Maths:</b> Without carrying, Dot Method  <b>Subtraction in Vedic Maths:</b> Nikhila Navatashcaramam Dashatah            Fraction-Addition and Subtraction  <b>Multiplication in Vedic Maths:</b> Base Method (any two numbers upto three digits), Multiplication by Urdhva Tiryak Sutra  <b>Miracle multiplication:</b> Any three-digit number by series of 1's and 9's.</p>	<b>10</b>
<b>II</b>	<p><b>Excellent Division , Lightening Squares :</b>            Division by Urdhva Tiryak Sutra (Vinculum method) , Squares of any two-digit numbers: Base method, Square of numbers ending in 5: Ekadhikena Purvena Sutra, Easy square roots: Dwandwa Yoga (duplex) Sutra, Square root of 2: Baudhayana Shulbasutra</p>	<b>10</b>



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<b>III</b>	<p><b>Rapid Cubes, Enlighten Algebra and Geometry :</b> Cubing: Yavadunam Sutra <b>Factoring Quadratic equation:</b> Anurupyena, Adyamadyenantyamantya Sutra Concept of Baudhayana (Pythagoras) Theorem <b>Circling a square:</b> Baudhayana Shulbasutra <b>Concept of pi:</b> Baudhayana Shulbasutra. <b>Concept angle (8) 0°, 30°, 45°, 60° and 90°:</b> Baudhayana number</p>	<b>10</b>
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**Course Outcome**

Learners should be able to

CO1 Understanding the principles and techniques of Vedic mathematics as described in ancient Indian texts.

CO2 Developing mental calculation skills to perform arithmetic operations quickly and accurately.

CO3 Applying Vedic mathematics techniques to solve complex mathematical problems efficiently.

CO4 Improving problem-solving abilities and logical reasoning through the study of Vedic mathematics.

CO5 Enhancing concentration, memory, and cognitive abilities through practicing Vedic mathematics techniques.

**Books and References:**

Sr. No.	Title	Author/s	Publisher	Edition	Year
1.	The Essential of Vedic Mathematics	Rajesh Kumar Thakur	Rupa Publications	-	2019
2.	Vedic Mathematics Made Easy.	Dahaval Bathia	Jaico Publishing,	-	2011
3	Vedic Mathematics: Sixteen Simple Mathematical formulae from the Vedas Motilal Banarasidas,	Jagadguru Swami Sri Bharati Krishna Trithaji,	-	-	2015.
4	Learn Vedic Speed Mathematics Systematically	Chaitnaya A. Patil	-	-	2018.
5	A Modern Introduction to Ancient Indian Mathematics	TS Bhanumurth	Wiley Eastern Limited	-	-

