

# बिरसा मुंडा द्रायबल युनिवर्सिटी Birsa Munda Tribal University

राजपिपला, जि॰ नर्मदा Rajpipla, Dist. Narmda Established by Tribal Development Department, Govt. of Gujarat

## School of Science

B.Sc. (Zoology) Programme

Subject Code & Name: BS03IKZOO1 Vedic Mathematics

## **Teaching and Evaluation Scheme:**

Teaching Scheme				Examination Scheme  Component Weightage (%)			
<u> </u>							
	Credits			CCE		SEE	
L	T	P	Total	TH	PWE	TH	PWE
2	0	0	2	50		50	

Programme Name	B.Sc. (Zoology)
Semester	III
Course Code	BS03IKZOO1
Course Title	Vedic Mathematics
Course Content Type(Th./Pr.)	Theory
Credits	2
Sessions+ Lab. Per Week	2
Total Teaching/Lab. Hours	30 Hours
* 2 Laboratory = 1 Session	

### Learning Objectives

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

### Prerequisites (if any)

12th passed with any stream

## **Learning Outcomes**

On the Completion of this course, students will able to:

- 1. Overcome the fear of maths.
- 2. Improved critical thinking.
- 3. Familiarity with the mathematical underpinnings and techniques.
- 4. Ability to do basic maths faster and with ease.
- 5. Appreciate the Mathematical advancements of Ancient India.



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UNIT	TOPIC/SUB-TOPIC	TEACHING HOURS	
Ι	<ul> <li>Introduction to Vedic Mathematics:</li> <li>Actual applications of the Vedic Sutras</li> <li>Contribution of Indian Mathematicians (Varahamihira, Bhaskaracharya, Nilakantha Somayaji, Bharati Krishna Tirtha) in the context of Arithmetic</li> <li>Addition &amp; subtraction of algebraic expression</li> <li>Multiplication Practical Application in "Compound Multiplication" Practice and Proportion in "Compound Multiplication" Vertically and Cross wise method Mixed Operation Deviation method</li> </ul>	15	
II	Introduction of Division and Divisibility  Division  Nikhilam Navtashcharam Method (Division of Two digits Number)  Paravartya Yojyet Method (Division of Three digits Number)  Divisibility  Ekadhiken Purven Method (Division of Two digits Number)  Eknunen Purven Method  Applications of Division and Divisibility  Square roots, Cube roots	15	

Unit I & II	<ul> <li>i. Vedic mathematics, Sixteen simple mathematics formulae from Ved Jagadguru Swami Shri Bharati Krishna Tirthaji, Motilal Banarasidas, New Del 2015</li> <li>ii. Vedic Mathematics Made easy, Dahaval Bhatia, Jaico Publishing, New Del 2011</li> <li>iii. The Essential of Vedic mathematics, Rajesh Kumar Thakur, Rupa Publication New Delhi, 2019</li> </ul>	lhi, lhi,
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#### **Practical**

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#### **Reference Books**

- 1. Vedic Ganit Nirdeshika Bhag-2, Vidya Bharti Akhil Bhartiya Shiksha Sansthan Kurushetra
- 2. Vedic Ganit, Motilal Banarsidas, New Delhi
- 3. Vedic Ganit Vihangam Drishti 1, Shiksha Sanskriti Uthhan Nyas Delhi
- 4. Lilavati of Bhaskracarya: A Treatise of Mathematics of Vedic Tradition

### Web Resources

https://youtu.be/PDCOZtI8Hhc?feature=shared

https://youtu.be/itj6PPEiFKY?feature=shared

https://youtu.be/wgfXaMJLrRI?feature=shared

https://youtu.be/0djtSeiCpow?feature=shared

https://youtu.be/kdHywSgbLRg?feature=shared

https://youtu.be/rZCv7zgIBj4?feature=shared

## Required Software(s) (if any)

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L:: Lecture, T:: Tutorial, P::Practical

CCE:: Continuous and Comprehensive Evaluation

(CCE Theory includes Mid Semester Examination, Assignment, MCQ quizzes, Seminar, Reflective notes, class participation, case analysis and presentation, slip tests (announced/surprised), attendance etc. or any combination of these)

PWE:: Practical Work Examination

(PWE includes Laboratory practical work, project work, viva simulation exercise work etc.)

SEE:: Semester End Evaluation

