

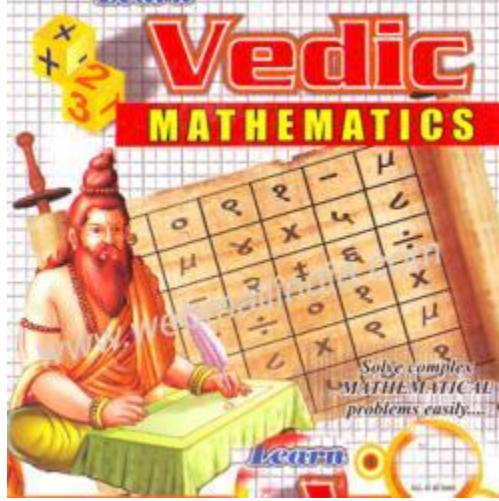


Kavikulaguru Kalidas Sanskrit University

University established by State Government of Maharashtra and UGC Recognized u/s 2f and 12B

Ramtek Office : Administrative Building, Mauda Road, Ramtek - 441106, Dist.Nagpur

Nagpur Office : 05th Floor, NIT Commercial Complex, Near Morebhavan, Sitabuldi, Nagpur 44001



Certificate course in Vedic Mathematics

Course Curriculum (Syllabus)

Approved by the Academic Council Meeting

(Revised From 2017-2018)

Approved by the Academic Council Meeting No. 1/ 2017, Item no. 16, Dt. 04.01.2017

Name of the Course	Certificate Course in Vedic Mathematics
Name of the Faculty	Faculty of Ancient Indian Sciences and Humanities
Examination Type	Six –Monthly (Two Examinations per Year)
Course Duration	01 January to 30 June & 01 July to 30 December
Eligibility	HSSC Or equivalent.
Medium	English, Sanskrit, Hindi, Marathi

Year	Internal		Theory		Other		Total		Credits	Remarks
	Max	Passing	Max	Passing	Max	Passing	Max	Passing		
Six Monthly Eligibility	60	21	240	84	0	0	300	105	--	--

Curriculum Charges : (NET copy Rs.30/-)

Academic Course Structure

Name of the Course	Certificate Course in Vedic Mathematics
Name of the Faculty	Faculty of Ancient Indian Sciences and Humanities
Examination Type	Six –Monthly (Two examinations per year)
Course Duration	Six Months
Total Credits	NOT APPLICABLE
Eligibility	HSSC OR Its Equivalent
Medium	English, Sanskrit, Hindi, Marathi

Paper Code	Paper Tital	Internal (Pr/Desr /Viva/Oral/ Test/Sessional etc.)		Theory		Other		Subject Total (in case of joint passing)		No. Credits (if Credit System is applicable)
		A	B	C	A+B+C					
		Max	Passing	Max	Passing	Max	Passing	Max	Passing	
	VEDIC ARITHMETIC	20	7	80	28			100	35	N.A
	VEDIC ALGEBRA	20	7	80	28			100	35	N.A
	VEDIC GEOMETRY	20	7	80	28			100	35	N.A
Final Total		60	21	240	84			300	105	

Internal Assessment - 20% for each course.

20 Marks

Sr.No.	Particulars	Marks
1	Periodical class tests	10 Marks
2	Seminars / Objective Tests / Assignments	05 Marks
3	Active participation in the class Interaction, overall conduct.	05 Marks

Certificate Course in Vedic Mathematics

Paper I -- VEDIC ARITHMETIC

Max. Marks : 80
Time : 3 Hrs

Unit 1

16 marks

- (i) Addition - Subtraction - Combined operations - बीजांक
- (ii) Multiplication methods : उर्ध्वातिर्यग्भ्याम्, निखिलम्, एकन्यूनेन, एकाधिकेज
अन्त्यययोर्दशकेऽपि.
- (iii) Vinculum - Operations.
- (iv) Awareness of 1 to 5 Vedic sutras as per Shankaracharya Bharthikrishan Teerthji Swamiji's book

Unit 2

16 marks

- (i) Division methods : निखिलम्, परावर्त्य योजयेत्, ध्वजांक.
- (ii) GCD and LCM
- (iii) Expression of GCD in terms of two numbers.

Unit 3

16 marks

- (i) Divisibility tests, Osculation & Reverse osculation.
- (ii) Division Algorithm, Quotient & Remainder.
- (iii) Duplex method.

Unit 4

16 marks

- (i) Squares & Square-roots for 6 digit number.
- (ii) Cubes & Cube-roots for 6 digit number.

Unit 5

16 marks

**Contribution of any two of the following Indian Mathematicians in Arithmetic only
(Min. 100 words each)**

आर्यभट्ट, रामानुजम, कापेकर, ब्रह्मगुप्त, महाविराचार्य

Internal Assessment

20 marks

Total Marks :100

Certificate Course in Vedic Mathematics

Paper II --- VEDIC ALGEBRA

Max. marks : 80
Time : 3 Hrs.

Unit 1

16 marks

- (i) Multiplication of polynomials by उर्ध्वतिर्यग्भ्याम्, निखिलम्, methods.
- (ii) Verification by गुणित समच्चयः.
- (iii) Awareness of 6 to 11 Vedic sutras as per Shankaracharya Bharthikrishan Teerthji Swamiji's book.

Unit 2

16 marks

- (i) Division of polynomials , Quotient & Remainder.
- (ii) Division algorithm.
- (iii) Applications of division methods.

Unit 3

16 marks

- (i) Factorization of polynomials up to degree 3 using आनुरुप्येण लोपनस्थापनाभ्याम् आद्यमाद्येन अन्त्यमन्त्येन methods. Verification by Beejank
- (ii) Simultaneous equations of 3 variables.
- (iii) GCD & LCM.
- (iv) Meru Prastar - Expansion of $(a+b)^n$

Unit 4

16 marks

- (i) Determinants of 3rd order.
- (ii) Partial Fractions.
- (iii) Introduction to Matrices up to multiplication only.

Unit 5

16 marks

Contribution of any two of the following Indian Mathematicians in Algebra only (Min. 100 words each)

Baaskracaya- (II) श्रीराम अभ्यंकर, नीलकंठ सोमयाजी, शिवा पिल्लै, महाविराचार्य

Internal Assessment

20 marks

Total Marks : 100

Certificate Course in Vedic Mathematics

Paper III---- Vedic Geometry

Max. Marks : 80

Time : 3 Hrs.

Unit 1

16 marks

- (i) Bodhayana Geometry, Circular functions.
- (ii) Derivation of trigonometrical ratios for standard angles.
- (iii) Awareness of 12 to 16 Vedic sutras as per Shankaracharya
Bharthikrishan Teerthji Swamiji's book.

Unit 2

16 marks

- (i) Inverse circular functions
- (ii) Solving trigonometric equations
- (iii) Relations between sides and angles of a triangle.

Unit 3

16 marks

Co-ordinate Geometry (Using Triplet)

- (i) Distance formula, Section formula.
- (ii) Equation to a straight line.
- (iii) Parallel & Perpendicular lines, Angle between the lines.
- (iv) Length of Perpendicular.

Unit 4

16 marks

- (i) Complex numbers : Geometrical representation, Operations of addition , Subtraction , equality , multiplication.
- (ii) Polar form of a complex number & reverse process.
- (iii) Modulus and amplitude of a complex number.

Unit 5

16 marks

**Contribution of any two of the following Indian Mathematicians in Geometry only
(Min. 100 words each)**

नारायण पंडीत, ज्येष्ठ देव, शंकर पारियर, सरस्वती अम्मा, माधवन

Internal Assessment

20 marks

Total Marks : 100