

**UNIVERSITY OF KERALA**

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| **University of Kerala** | | |
| Discipline: SANSKRIT |  | Time: 1 Hour (60 Mins) |
| Course Code: UK1MDCSGE101 |  | Total Marks: 28 |
| Course Title: VEDIC MATHEMATICS |  |  |
| Type of Course: MDC |  |  |
| Semester: 1 |  |  |
| Academic Level: 100-199 |  |  |
| Total Credit: 3, Theory: 2 Credit, Practical: 1 Credit |  |  |

Part A. 4 Marks. Time: 5 Minutes Objective Type. 1 Mark Each. Answer All Questions

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(Cognitive Level: Remember/Understand)

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| **Qn.**  **No.** | **Question** | **Cognitive Level** | **Course Outcome (CO)** |
| 1. | वैदिकगणितसूत्राणां समाहर्ता कः? Who is the compiler of the Vedic Mathematics Sutras? | Remember | CO-1 |
| 2. | वैदिकगणिते उपसूत्राणि कति सन्ति? How many are the corollary Sutras in Vedic mathematics? | Remember | CO-4 |
| 3. | उचितं सूत्रं लिखत। Write the appropriate Sutra: 34 X 36 | Understand | CO-5 |
| 4. | ध्वजाङ्केन उपपादयत। Deliver in ‘flag digit’ method: 45 | Understand | CO-4 |

Part B. 8 Marks. Time: 15 Minutes

Short Answer. 2 Marks Each. Answer All Questions

(Cognitive Level: Understand/Apply)

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| **Qn.**  **No.** | **Question** | **Cognitive Level** | **Course Outcome**  **(CO)** |
| 5. | दशक्रमसम्प्रदायं विशदयत। Explain the Ten-order system. | Understand | CO-4 |
| 6. | विङ्कुलं व्याख्यात। Explain the Viṅculam. | Understand | CO-5 |
| 7. | निखिलेन समाधत्त। Solve using Nikhilam – 432÷98 | Apply | CO-7 |
| 8. | सूत्रं योजयत। Implement the Sutra: 82=64 | Apply | CO-6 |

Part C. 16 Marks. Time: 40 Minutes

Long Answer. 4 Marks Each. Answer all 4 Questions, choosing among options within each question.

(Cognitive Level: Apply/Analyse/Evaluate/Create).

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| **Qn.**  **No.** | **Question** | **Cognitive**  **Level** | **Course**  **Outcome (CO)** |
| 9. | वेदगणितसूत्रं यथायोग्यं विनियुज्य प्रश्नद्वयमुत्तरत। Apply appropriate Vedic Mathematical Sutras and answer any TWO questions.  i) 641X9999 ii) 3542 iii) 1043 iv) √8464 | Apply | CO-7 |
| 10. | द्वयेन ‘ऊर्ध्वतिर्यग्भ्याम्’ इति सूत्रं साधयत। Prove the ‘Vertically and Crosswise’ Sutra answering any TWO:  i) 12X34 ii) 123X456 iii) (a+b) (a-b) iv) 2a+3 | Analyze | CO-3 |
| 11. | सूत्रं संसाध्य एकमुत्तरत। Answer any ONE proving the given Sutras.  i) निखिलं नवतश्चरमं दशतः। ii) ii) आनुरूप्ये शून्यमन्यत्। | Evaluate | CO-5 & CO-10 |
| 12. | बीजगणितरीत्या एकस्य अर्थं प्रकाशयत। Compose algebraic equations expressing the meaning of any ONE Sutras. i) शून्यं साम्यसमुच्चये ii) परावर्त्य योजयेत्। | Create | CO-9 |



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| **Cognitive**  **Level** | **Marks** | **Percentage** |
| Remember | 2 | 7.1 |
| Understand | 6 | 21.4 |
| Apply | 8 | 28.6 |
| Analyse | 4 | 14.3 |
| Evaluate | 4 | 14.3 |
| Create | 4 | 14.3 |
| **TOTAL** | 28 | 100.0 |