



RAN-2203080301060002

M.Sc. (Sem. -I) Examination November - 2025

Mathematics (Skill Based - Vedic Mathematics)

Time: 2 Hours]
[Total Marks: 30
સૂચના : / Instructions

- (1) ઉપરોક્ત દર્શાવેલ વિગતો ઉત્તરવહી પર અવશ્ય લખવી.
Fill up strictly the above details on your answer book
- (2) Figure to the right indicates full marks of the question
- (3) Follow usual notations and conventions
- (4) Attempt any Six
- (5) All question carry equally marks.

Seat No.:

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Student's Signature

Q. 1 Solve the following questions using Ekadhikena Purvena Sutra

- 1) Find the square of 1225^2
- 2) Find the product of 441×449
- 3) Find $11/13$ by Division and Multiplication method

Q. 2 Solve the following questions using Nikhilam Navatascaramam Dasatah Sutra

- 1) $52798 - 26921$
- 2) 99×91
- 3) 96×10
- 4) Find Quotient and Remainder: $1011649/9$
- 5) Find Quotient and Remainder: $2123/97$

Q. 3 Find the products using Urdhva Tiryabhyam Sutra

- 1) 19×25
- 2) $(x^2 - x - 1)(2x^2 - x - 2)$
- 3) 1010×3578
- 4) $(x^2 - 7x)(x + 5)$
- 5) 7812×561015

Q. 4 Find the Quotient and Remainder for the problems using Paravartya Yojayet Sutra

- 1) $137712/102$
- 2) $24841/112$
- 3) $10269/103$
- 4) $15649/12$
- 5) $1233/11$

Q. 5 Find the value of x using Sunyam Samya Samuccaye Sutra

- 1) $\frac{1}{x-4} + \frac{1}{x-5} = \frac{1}{x-6} + \frac{1}{x-3}$
- 2) $10(3x + 6) = -5(3x + 6)$
- 3) $\frac{3x+10}{4x-3} = \frac{2x-5}{x+8}$
- 4) $\frac{5}{4x+3} + \frac{5}{3x+11} = 0$

Q. 6 (1) Solve the following questions using Anurupye Sunyamanyat Sutra

- a) $4x + 3y = 2$
 $6x + 12y = 3$
- b) $12x + 10y = 15$
 $16x + 8y = 20$

(2) Solve the following questions using Sankalana Vyavakalanabhyam Sutra

- a) $45x - 23y = 113$
 $23x - 45y = 91$
- b) $59x + 71y = 189$
 $71x + 59y = 201$

Q. 7 (1) Find the values of x using Purana Puranabhyam Sutra

- a) $x^3 - 6x^2 + 9x - 2 = 0$
- b) $x^3 + 6x^2 + 13x + 10 = 0$

(2) Find the values of x using Calana Kalanabhyam Sutra

- a) $11x^2 + 7x + 7 = 0$
- b) $4x^2 - 4x + 1 = 0$

Q. 8 Discuss the Ekanyunena Purvena Sutra to find the multiplication of

- 1) 5478×9999
- 2) 57×99
- 3) 23×999
- 4) 11235×999
- 5) 10567×99999

Q. 9 (1) Solve the following questions using Anurupyena Sutra

- a) 32^3
- b) 24×26
- c) 48×42

(2) Find the square of number using Yavadunam Tavadunikrtya Varganca Yojayet

- a) 103
- b) 9993

Q. 10 Factoring quadratic equation using Adyamadyenantyamantyena Sutra and verify it by Gunita Samuccayah Samuccaya Gunitah Sutra

- 1) $6x^2 - 37x + 6$
- 2) $3x^2 + 2x - 5$
- 3) $2x^2 - 5x + 2$
