GURUKUL KANGRI DEEMED TO BE UNIVERSITY, HARDWAR
DEPARTMENT OF MATHEMATICS AND STATISTICS

SYLLABUS OF VALUE ADDED COURSE
OPEN FOR ALL STUDENTS OF UNIVERSITY

Title of the Course : Mathematics for Competitive Examinations
Course Code : MA24VAC01
Nature of the Course : Certificate
Total Credits : 02
Distribution of Marks : 50(Ext.)

COURSE OUTCOMES: By the end of this course, students will be able to
CO1: Apply vedic mathematics techniques (Sutras and Upsutras) to perform faster and more efficient basic arithmetic operations.
CO2: Understand core mathematical concepts such as percentages, interest calculations, and ratio-proportion to solve quantitative problems encountered in competitive exams.
CO3: Develop logical reasoning and analytical thinking skills by solving problems involving series, coding-decoding, patterns, and other reasoning types relevant to aptitude tests.

UNITS	CONTENTS	L	T	P	Total Hours
1	Vedic Mathematics for Faster Calculations: Sutras and Upsutras in vedic maths, Basic operations via vedic maths. Nikhilam Navatashcaramam Dashatah (All from 9 and last from 10): Multiplication by UrdhvaTiryak Sutra. Miracle Multiplication: Any three-digit number by series of 1's and 9's, Division using Vinculum method.	8	2	-	10
2	Basic Mathematics: Percentage, Average, Mean, Profit & Loss, Simple interest, Compound interest, Discount, Measurement and Unit Conversion, Time and Work, Ratio and Proportion, Time and Distance.	8	2	-	10
3	Mathematical and Logical Reasoning: Classification of Numbers, Number Series, Letter Series, Patterns, Mirror images, Logical diagram test, Coding-Decoding, Direction sense test, Word analogy, Time and Calendar.	8	2	-	10
	Total (in Hrs.)				

SUGGESTED READINGS:

1. R. D. Sharma, Mathematics, *Dhanpat Rai Publications*.
2. Swami Bharati Krishna Trithaji, Vedic Mathematics, *Motilal Banarsidas, New Delhi*.
3. R. K. Thakur, Advanced Vedic Mathematics, *Rupa Pub. India Pvt. Ltd., New Delhi*.