

**FOUR YEAR UNDER GRADUATE PROGRAM(2024-28)**  
**DEPARTMENT OF MATHEMATICS**  
**COURSE CURRICULUM**

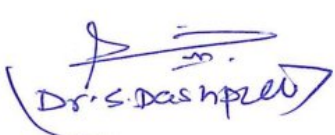
<b>Part A: Introduction</b>			
<b>Program: Bachelor in Science</b> (Certificate/Diploma/Degree/Honors)		Class: B.Sc. I/III/V Sem	Session:2024-2025
1	Course Code	<b>MAVAC-1</b>	
2	Course Title	<b>Basic Mathematics and Logic</b>	
3	Course Type	<b>Value Addition Course</b>	
4	Course Learning Outcome (CLO)	<p><b>This Course will enable the students-</b></p> <ul style="list-style-type: none"> <li>➤ To orient them towards life-long learning, to develop power of concentration and to overcome the fear of mathematics from their mind.</li> <li>➤ To cultivate scientific temper through systematic, critical and lateral thinking.</li> <li>➤ To enhance their logical, analytical and reasoning skills useful for competitive exams.</li> <li>➤ To make understand the relevance and need of quantitative methods for making business decisions.</li> </ul>	
5	Credit Value	2 Credits	<i>Credit = 15 Hours - learning &amp; Observation</i>
6	Total Marks	Max. Marks: 50	Min Passing Marks: 20

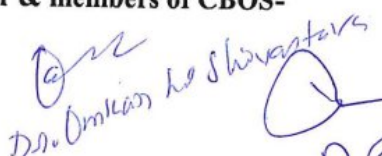
<b>PART -B: Content of the Course</b>		
<b>Total No. of Teaching-learning Periods (01 Hr. per period) - 30 Periods (30 Hours)</b>		
Unit	Topics (Course contents)	No. of Period
<b>Basic Mathematics</b>		
<b>I</b>	Brief history of Vedic Mathematics (In Indian Knowledge Tradition), Sanskrit terminology involved in 16 Sutras and 13 Sub-Sutras and their meaning , Addition , Subtraction , Multiplication & Division using different techniques of Vedic Mathematics , Squaring numbers , Square roots of perfect squares , Cube roots of perfect cubes , Methods of quick verification of answers through Digit Sum Method	<b>8</b>
<b>II</b>	Problem based on Numbers, Decimal Fractions, Average, Simple Interest , Percentage ,Clocks	<b>8</b>
<b>III</b>	Problems on Profit & Loss , Discount, Ages, Speed, Time & Distance, Train , Ratio & Proportion, Mixture	<b>8</b>

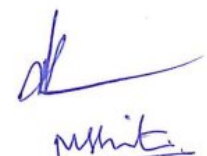
<b>IV</b>	<b>Logical Ability:</b> Problems on Series Completion , Coding- Decoding , Inserting the Missing Character , Problems on Mirror Image & Water Image Problems on Blood relations , Direction Sense Tests , Cubes & Dice , Logical Deductions based on Universal, Particular, Affermative & Negative Premises.	<b>6</b>
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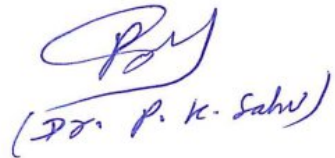
<b>Part C - Learning Resource</b>		
<b>Text Books, Reference Books, Other Resources</b>		
<b>Text Books Recommended-</b>		
1. Dr. R.S. Aggarwal, Quantitative Aptitude, S. Chand and Company Ltd., New Delhi. 2. Abhijit Guha, Quantitative Aptitude, Tata McGraw Hill Publishing Company Limited., New Delhi. 3. Dr. R.S. Aggarwal , Verbal & Non –Verbal Reasoning , S. Chand and Company Ltd., New Delhi		
<b>Reference Books Recommended-</b>		
4. Rajesh Kumar Singh , Tricky Mathematics , Success Mantra Publications , Patna 5. Govind Prasad Singh & Rakesh Kumar , Text Book of Quickest Mathematics (For all Competitive Examinations) 6. Vedic Mathematics Made Easy Published by Dhaval Bhatia		
<b>PART -D: Assessment and Evaluation</b>		
Suggested Continuous Evaluation Methods:		
Maximum Marks: 50 Marks		
Continuous Internal Assessment (CIA): 15 Marks		
End Semester Exam (ESE): 35 Marks		
Continuous Internal Assessment (CIA): (By Course Teacher)	Internal Test / Quiz-(2): 10 & 10 Assignment/Seminar +Attendance - 05 Total Marks - 15	Better marks out of the two Test / Quiz + obtained marks in Assignment shall be considered against 15 Marks
End Semester Exam (ESE):	Two section – A & B Section A: Q1. Objective – 05 x1= 05 Mark; Q2. Short answer type- 5x2 =10 Marks Section B: Descriptive answer type qts., 1 out of 2 from each unit- 4x05 =20 Marks	


**Name and signature of convener & members of CBOS-**

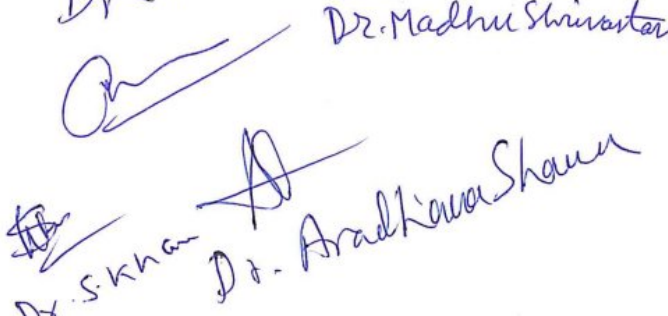
  
 Dr. S. Dasgupta

  
 Dr. Anil Kumar Shrivastava

  
 Dr. Madhu Shrivastava

  
 Dr. P. K. Sahu

  
 Dr. S. Khan

  
 Dr. Aradhana Sharma