

Session: 2026-27			
Part A – Introduction			
Subject	Mathematics/Statistics		
Semester	VI		
Name of the Course	Quantitative Aptitude		
Course Code	SEC-3		
Course ID			
Course Type: (CC/MIC/ MDC/ /VOC/AEC/VA C/SEC)	SEC		
Course Learning Outcomes(CLOs)	After completing this course, the learner will be able to: 1. Understand and formulate mathematical equations for various problems and apply appropriate methods to solve them. 2. Apply concepts of work, time and distance, work and wages, simple interest, and compound interest to solve practical problems. 3. Use concepts of set theory and measures of central tendency to analyze data and draw meaningful conclusions. 4. Develop logical reasoning and problem-solving skills through pattern recognition, coding–decoding, blood relations, seating arrangements, probability, and data interpretation.		
Credits	Theory	Practical	Total
	2	1	3
Contact Hours	2	2	4
Internal Assessment Marks	15	5	20

End Term Assessment Marks	35	20	55
Examination Time	2 Hours	---	75

Part B - Course Content

Instructions for Paper- Setter Note: The examiner will set 9 questions asking two questions from each unit and one compulsory question by taking Course Learning Outcomes (CLOs) into consideration. The compulsory question (Question No. 1) will contain 5 parts covering entire syllabus. The examinee will be required to attempt 5 questions, selecting one question from each unit and the compulsory question.

Unit	Topic	Contact Hours
I	Linear Equations, Quadratic equations, System of algebraic equations in two variables and their applications in simple problems: Problems on ages, Clocks.	8
II	Time, distance and speed: Problems based on trains, Boats and Streams, Pipes and Cistern. Work and time: Problems on work and time, Work and wages. Simple interest, Compound Interest.	7
III	Basic idea of set theory to solve practical problems and Venn diagrams. Data interpretation: Raw and grouped data, Bar Graph, Pie Chart, Mean, Median and Mode.	7
IV	Logical Reasoning & Applications: Identifying patterns and next terms, Letter and number coding patterns, Blood Relation problems, Movement and distance calculations. Events and sample space, Basic idea of Probability to solve practical problems.	8

Practical

Problem Solving- Questions related to the following problems will be solved and their record will be maintained in the Practical Notebook: - To solve problems related to clocks. - To write the date of birth of your family members and determine the day of their	30
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birth. - Problems related to upstream and downstream of boat. - Compare the simple interest and compound interest for a given amount deposited for fixed time at a fixed rate. - Draw Venn Diagram for the following - Union of sets - Intersection of sets - Difference of sets - Problem solving related to pipes and cisterns. - Problem solving related to determination of time taken by two trains of given lengths, to cross each other, when their speeds are given. - Problems involving formulation and solution of quadratic equations in one variable. - Draw a bar-graph for the percentage of expenditure occurred on miscellaneous heads (atleast 5 items) for your family income and write your observation in respect of bar- graph. - Draw a pie-chart by taking data of problem (9). - Taking the annual export data for three companies for last six years, draw a line-graph. - Find the next term in the series: 2, 6, 12, 20, 30, ? - If APPLE is coded as 50 and MANGO is coded as 57, what is the code for ORANGE? - Pointing to a photograph, Rahul said, "She is the daughter of my grandfather's only son." How is the woman in the photograph related to Rahul? - Write down the sample space for tossing three coins one by one and determine the probabilities of occurrence of all possibilities of heads.	
Suggested Evaluation Methods	
Internal Assessment: ➤ Theory 15 - Class Participation: 5 - Seminar/presentation/assignment/quiz/class test etc.: 5 - Mid-Term Exam: 5 ➤ Practicum 5 - Seminar/Demonstration/Viva-voce/Lab records etc.: 5	End Term Examination: ➤ Theory 35 - Written Examination ➤ Practicum 20 - Lab record, viva-voce, write up and execution of the program
Part C-Learning Resources	

Recommended Books:

1. R. S. Aggarwal (2022). *Quantitative Aptitude*. S Chand & Company Limited, New Delhi.
2. A. Guha (2020). *Quantitative Aptitude* (7th Edition). Mc Graw Hill Publications.
3. V. Dyke, J. Rogers and H. Adams (2011). *Fundamentals of Mathematics*, Cengage Learning.
4. A.S. Tussy, R. D. Gustafson and D. Koenig (2010). *Basic Mathematics for College Students*. Brooks Cole.
5. C. C. Pinter (2014). *A Book of Set Theory*. Dover Publications.
6. R.V. Praveen (2013). *Quantitative Aptitude and Reasoning* (2nd Edition), PHI learning Pvt. Ltd. Delhi.

