FACULTY OF SCIENCES

SYLLABUS
of
Certificate Course in

Quantitative Aptitude and Reasoning

Session: 2023-24

The Heritage Institution

KANYA MAHA VIDYALAYA JALANDHAR
(Autonomous)

Course Title: Quantitative Aptitude and Reasoning
Course Code: CQAL-1331
Session-2023-24

Programme Specific Outcomes

After the successful completion of the course, the students will be able to:

PSO 1: Understand the core concepts of quantitative aptitude.

PSO 2: Understand the primary concepts of reasoning.

PSO 3: Attain adequate competency in use of logical reasoning and skills ·

PSO 4: Compete in various competitive exams like GATE, GRE, Bank PO/ Clerical/ Specialist Officers, CAT, CMAT, UPSC, SSC, LIC, Railway Recruitment, Sub Inspectors of Police, CBI, CPO etc.

PSO 5: Handle campus placement test involving quantitative aptitude and reason.

PSO 6: Provide coaching for the competitive exams.

Scheme and Curriculum of Examinations of certificate course in Quantitative Aptitude and Reasoning

Session-2023-24

Quantitative Aptitude and Reasoning						
Course Code	Course Title	Course Type	Marks			Examination time (in Hours)
			Total	L	P	
CQAL-1331	Quantitative Aptitude and Reasoning	C	50	50	-	3
Total			50			

C-Compulsory

Duration: 30 contact hours (6 Months)

Credit: 2-0-0

Marks: 50

Eligibility: Senior Secondary, Undergraduate and Post graduate students from any stream.

Method of Delivery: Theory

Examination Pattern: Written Examination

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Course Outcomes

After passing this course, the students will be able to:

CO 1: Demonstrate procedural fluency with real number arithmetic operations and use these Operations to represent real world scenarios and to solve stated problems and demonstrate number sense and conversion between fractions, decimals and Percentages.

CO 2: Use simple and compound interest to do business calculations such as value of money, maturity value, present value, future value and able to differentiate which math method should be used for different problems.

CO 3: Analyze data being presented in the form of tables, venn diagrams, pie charts.

CO 4: Understand and apply the concepts of coding-decoding, clock and seating arrangement in real life problems.

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Duration: 30 contact hours   Credit: 2-0-0

Examination Time: 3 Hours   Max.Marks: 50

Instructions for the examiner:
Eight questions of equal marks (10 marks each) are to be set, two in each of the four Sections (A-D). Questions of Sections A-D should be set from Units I-IV of the syllabus respectively. Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each section. The fifth question may be attempted from any Section.

UNIT – I

Quantitative Ability (**Basic Mathematics**): Number Systems, LCM and HCF, Decimal Fractions, Simplification, Square Roots and Cube Roots, Average, Problems on Ages, Surds & Indices, Percentages, Problems on Numbers.

UNIT – II

Quantitative Ability (**Applied & Engineering Mathematics**): Logarithm**,** Permutation and Combinations**,** Probability**,** Profit and Loss**,** Simple and Compound Interest**,** Time and Distance**,** Time and Work**,** Ratio and Proportion**,** Area**,** Mixture.

UNIT – III

Data Interpretation and Reasoning: Tabulation**,** Bar Graphs**,** Line Graphs**,** Pie Chart**,** Venn Diagrams, Analytical Reasoning, Mirror Images.

UNIT – IV

Logical Reasoning: Verbal Analogy, Verbal Series, Verbal Classification**,** Blood Relation**,** Direction Sense**,** Coding – Decoding**,** Calendars**,** Clock.

Text Books :

1. Dr. R. S. Aggarwal, Quantitative aptitude for Competitive examination By R S Agarwal, S. Chand Co. Pvt. Ltd., New Delhi, Eighth Edition, 2017 (Scope as in Chapters- 1-13, 17-18, 21-24, 27-28, 30-31, 36-39).
2. Dr. R. S. Aggarwal, A Modern Approach To Verbal & Non Verbal Reasoning, S. Chand Co. Pvt. Ltd., New Delhi, Revised Edition, 2018 (Scope as in Chapters- 1-5, 8-9).