

## PEA305:ANALYTICAL SKILLS-I

**Course Outcomes:** Through this course students should be able to

- CO1 :: reproduce the concepts learned to solve various questions of quantitative and reasoning aptitude
- CO2 :: observe the data given and interpret it from the given problem
- CO3 :: apply the Concepts to solve Company Specific Aptitude tests
- CO4 :: analyze the problems and use logic to interpret and handle different situations
- CO5 :: select the appropriate approach to initiate the given problem
- CO6 :: solve quantitative and reasoning aptitude in competitive examinations

### Unit I

**Number system :** HCF & LCM, divisibility rules, classification of numbers, factors, factorials, unit digit calculation, remainder properties

**Average :** basic average calculations, average increase and decrease, weighted average

**A.P and G.P :** basic formulas on arithmetic and geometric progressions, calculation of general terms, sum of n terms calculation

### Unit II

**Percentage :** basic percentage calculations, percentage to fraction, percentage comparison, percentage increase and decrease, population change in percentage

**Profit loss discount :** basic concepts of cost price selling price and marked price, calculations of profit and loss percentage, types of discount and discount percentages, comparison of profit or loss with discount percentage

**Simple and compound interest :** basic concepts of interest calculations, comparison of simple and compound interest, EMI calculations

### Unit III

**Logical reasoning :** number series, alpha series, alphabet test, coding and decoding, language coding

### Unit IV

**Ratio and proportions :** basic concepts of ratio and proportions and ages, problems based on ratio and proportions and ages, problems based on partnerships and profit sharing

**Alligation and mixtures :** conceptual knowledge of alligation and mixtures, problems based on alligation and mixtures

### Unit V

**Permutation :** basic principle of counting, numerical permutation(formation of numbers and sum of numbers), alpha permutation(rearrangement of words and rank of a word), linear and circular permutation, logical permutation

**Combination :** basic formulas of combination, formation of committee, combination of identical objects

**Probability :** concept of probability, classification of events, conditional probability, problems based on coins dices and cards

### Unit VI

**Analytical reasoning :** Blood Relation, Direction Sense

### Text Books:

1. QUANTITATIVE APTITUDE FOR COMPETITIVE EXAMINATIONS by DR.R.S. AGGARWAL, S Chand Publishing
2. A MODERN APPROACH TO VERBAL AND NON-VERBAL REASONING by DR. R.S. AGGARWAL, S Chand Publishing

### References:

1. MAGICAL BOOK ON QUICKER MATHS by M.TYRA, BANKING SERVICE CHRONICLE
2. MAGICAL BOOK SERIES ANALYTICAL REASONING by M.K. PANDEY, BANKING SERVICE CHRONICLE