

## EPEA515: ANALYTICAL SKILLS-I

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

CO1 :: observe the basic concepts of reasoning and quantitative aptitude

CO2 :: apply the learned concepts to solve the company specific reasoning and quantitative aptitude tests

CO3 :: analyze the problem and use logic to interpret and handle different situations

CO4 :: understand the concepts to solve the problems in given time

CO5 :: reproduce the concepts and use it to solve the applications

CO6 :: evaluate the knowledge by cracking online tests

**Number system** : classification of numbers, rules of divisibility, multiplication and squaring of numbers, HCF & LCM of numbers, cyclicity of unit digit, remainder theorem

### Unit I

**Average** : average of numbers, arithmetic mean, weighted average

### Unit II

**Mathematical operations** : BODMAS rule, calculation based problem, conversion of symbols into signs

### Unit III

**Percentage** : commodity price increase/decrease, comparison based questions, population based examples, successive percent changes, budget based problems

### Unit IV

### Unit V

**Profit and loss** : cost price, selling price, profit and loss, calculation of profit/loss percent, false weight, discount, successive discount, marked price

### Unit VI

**Direction sense test** : understanding of directions, different types of practice problems

### Unit VII

**Blood relation** : cracking jumbled up descriptions, relation puzzle, coded relations

### Unit VIII

**Number, ranking and time sequence** : number test, ranking test, time sequence test

### Unit IX

**Ratio and proportion** : ratio and its types, proportion and its types, direct and indirect variations, partnership

### Unit X

**Alligation or mixture** : concept and rules of alligation, problem based on mixing of liquids/items

### Unit XI

**Problem on ages and numbers** : problems on ages, problem on numbers

### Unit XII

**Permutation and combination** : factorial, difference between permutation & combinations, circular permutation, arrangement and selection based problems, distribution and division

**Probability** : experiment, sample space, event, probability of occurrence of an event, bayes theorem, odds of an event, selection based problems, binomial distribution

### Unit XIII

**Logical venn diagram and set theory** : venn diagram based problems, concept of set theory

**Syllogism** : all, some and none relations, related statements with venn diagram

### Unit XIV

**Data interpretation** : basics of data interpretation, average and percentage, tabulation, bar graphs, pie charts, line graphs

**Text Books:**

- 1 . QUANTITATIVE APTITUDE FOR COMPETITIVE EXAMINATIONS by DR. R S AGGARWAL, S Chand Publishing
2. A MODERN APPROACH TO VERBAL & 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. ANALYTICAL REASONING by M.K. PANDEY, BANKING SERVICE CHRONICLE