PEA515:ANALYTICAL SKILLS-I

L:2 T:2 P:0 Credits:4

Course Outcomes: Through this course students should be able to

CO1 :: apply the procedural fluency with number system and mathematical operations to solve the stated problems.

CO2 :: apply an appropriate approach to solve problems related to percentage and profit & loss.

CO3 :: analyze the reasoning aptitude problems such as blood relation, direction sense and number ranking & time sequence test to solve related problems.

CO4 :: apply the analytical concepts learnt to solve the questions of ratio & proportion and alligation & mixture.

CO5 :: use the concepts of permutation & combination and probability to solve related problems.

CO6 :: apply the concepts learnt to solve the questions related to syllogisms and data interpretation.

Unit I

Vedic maths : fast calculation techniques

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

Average : average calculations, inclusion and exclusion, weighted average

Unit II

Percentage : calculation of percentage, percentage comparison, percentage to fraction conversion, successive percent change, problems based on marks, election, population and percentage error

Profit and loss : concept of cost price, selling price and marked price, calculations of profit and loss percentage, problems on discount, faulty weight, number of articles and common selling price

Unit III

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

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

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

Unit IV

Ratio and proportion : concept of ratio and proportion, problems based on ages and partnership

Alligation and mixture : concept based question of alligation and mixtures, replacement based questions

Unit V

Permutation and combination : principles of counting, problems based on selection, arrangement, numbers, words, rank and distribution, geometric application, circular arrangement

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

Unit VI

Syllogism : logical venn diagrams, ability to relate a certain given group diagrammatically, possibility questions

Data interpretation : concept 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