PEA515:ANALYTICAL SKILLS-I

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

Course Outcomes: Through this course students should be able to

CO1 :: employ the concepts learnt to solve the basic mathematical questions like Mathematical operations.

CO2 :: use the concepts of alligation or mixture to interpret and handle different situations.

CO3 :: outline the analytical methods in deciphering the data and decision making in syllogism and data interpretation

CO4 :: articulate an appropriate approach to initiate the problems related to logical reasoning like blood relation

CO5 :: illustrate the concepts of ratio and proportions, to utilise in real life situations

Unit I

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

Average : average of numbers, arithmetic mean, weighted average

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

Unit II

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

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

Unit III

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

Blood Relations : 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 : ratio and its types, proportion and its types, direct and indirect variations, partnership

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

Problems on Ages and Numbers : problems on ages, problem on numbers

Unit V

Permutations and Combinations : 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 VI

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

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