

PEA307:ADVANCED ANALYTICAL SKILLS-I

L:2 T:1 P:0 Credits:3

Course Outcomes: Through this course students should be able to

CO1 :: demonstrate procedural fluency with numerations and mathematical operations to solve the stated problems

CO2 :: learn the concepts to solve various income and interest based questions

CO3 :: read the data given and interpret it for solving flow chart

CO4 :: apply the analytical concepts learnt to solve questions of ratio and proportion

CO5 :: employ the concepts of counting methods to solve probability based questions

CO6 :: identify an appropriate approach to solve logical reasoning problems related to blood relations and directions

Unit I

Advanced numeration : factors, factorials, unit digit calculation, remainder properties, advanced number based questions, HCF & LCM

Mean : inclusion and exclusion-related questions, missing number questions, questions based on cricket

Linear quadratic equations : statement based questions, roots of the quadratic equation

Unit II

Advanced percentage : percentage to fraction, population change in percentage, percentage increase and decrease, questions based on examination and election

Income based questions : concepts of cost price selling price and marked price, successive discount, questions based on selling an article and interchanging its values, dishonest seller-related questions

Interest based problems : concepts of interest calculations, questions based on the difference between CI and SI, EMI calculations

Unit III

Flow chart : concepts of flow chart

Alpha numeric coding : coding and decoding, number, alphabet series questions, language coding questions

Unit IV

Advanced ratio and proportion : questions based on addition, difference and product, questions based on income and expenditure, questions based on coins and rupees, problems based on ratio and proportions and ages, problems based on partnerships and profit-sharing

Components and blending : conceptual knowledge of alligation and mixtures, problems based on alligation and mixtures

Unit V

Counting methods : counting method, numerical permutation(formation of numbers and sum of numbers), alpha permutation(rearrangement of words and rank of a word), logical permutation, linear and circular permutation, formulas of combination, combination of identical objects, distribution based questions, formation of committee

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

Unit VI

Analytical reasoning : direction sense : questions based on determining directions & distance, blood relation: question based on english alphabet problem, question based on word problem

Non verbal reasoning : visual reasoning: mirror/water image, paper cutting and folding, completion of the figure, embedded figure, deviation of figure

Text Books:

1. QUANTITATIVE APTITUDE FOR COMPETITIVE EXAMINATIONS by DR.R.S. AGGARWAL, S. CHAND & COMPANY
2. MAGICAL BOOK SERIES ANALYTICAL REASONING by M.K. PANDEY, BANKING SERVICE CHRONICLE

References:

1. A MODERN APPROACH TO VERBAL AND NON-VERBAL REASONING by DR. R.S. AGGARWAL, S. CHAND & COMPANY
2. MAGICAL BOOK ON QUICKER MATHS by M.TYRA, BANKING SERVICE CHRONICLE