

INSTITUTE	FACULTY OF TECHNOLOGY
PROGRAM	BACHELOR OF TECHNOLOGY (CIVIL ENGINEERING)
SEMESTER	5
COURSE TITLE	QUANTITATIVE & LOGICAL ABILITY - 3
COURSE CODE	01CR0503
COURSE CREDITS	0

Objective:

- 1 This course shall enrich students' preparedness for the upcoming competitive exams, entrance test, and/or placements.
- 2 This course will also enhance students' logical skills, decision making skill, and comprehension skill.

Course Outcomes: After completion of this course, student will be able to:

- 1 Inculcate smart approach in quantitative problem solving.
- 2 Build a strong base in the fundamental mathematical concepts.
- 3 Grasp the approaches and strategies to solve problems with speed and accuracy.
- 4 Devise plans for QA domain of the placement drives and competitive exams

Pre-requisite of course:..

Teaching and Examination Scheme

Theory Hours	Tutorial Hours	Practical Hours	ESE	IA	CSE	Viva	Term Work
1	0	0	50	0	0	0	50

Contents : Unit	Topics	Contact Hours
1	Introduction and Pre-Test Pre Class Test	1
2	Percentage Reciprocals & equivalent percentage Speed techniques of calculating percentage Change of base concept Multiplying factor concept	1
3	Profit, Loss & Discount Explanation of basic terms Simple profit & loss concept Discount & multiple discount concept Faulty balance & wrong measurement, discount or mark up or mixing impurities Other combined examples	1

Contents : Unit	Topics	Contact Hours
4	Simple Interest & Compound Interest Important formulae & Calculation Calculation of missing value concept Difference between SI and CI for various years. Comparison of SI and CI investment concept Sub topics: Difference between SI and CI for various years. Comparison of SI and CI investment concept	1
5	Class Test 1 and doubt solving session Class Test	1
6	Ratio and Proportion Ratio & Proportion, Ratio concept and rules & distributing amount in ratio	1
7	Partnership Partnership, Partnership ratio and profit distribution	1
8	Class Test 2 and doubt solving session Class test	1
9	Time & Work Concept of Time, Work & Efficiency, Concept of negative work, Product constancy, Pipes & Cisterns, Miscellaneous Examples	1
10	Time, Speed & Distance Basic formulae & its proportionality, Concept of Relative Speed (Same & Opposite directions) Concept of Average Speed, Problems on Trains	2
11	Permutations and Combinations Concept of Permutations & Combinations Permutation & combination with conditions Permutation & Combination of identical things Circular Permutation	1
12	Probability Formula & Basic terms Finding total no. of cases Examples of Coin and Dice Types of events Odds in favour & Odds against Conditional Probability Independent Events	1
13	Class Test 3 and doubt solving session Class Test	1
Total Hours		14

Textbook :

- 1 Quantitative Aptitude, Dr. R. S. Agarwal, S. Chand, 2021
- 2 Quantitative Aptitude, Abhijit Guha, MC Graw Hills, 2020
- 3 Quantum Cat, Sarvesh Kumar Verma, Arihant Publication, 2020

References:

- 1 Magical Book On Quicker Maths, Magical Book On Quicker Maths, M. Tyra, BSC Publishing Co. Pvt. Ltd, 2013

Suggested Theory Distribution:

The suggested theory distribution as per Bloom's taxonomy is as follows. This distribution serves as guidelines for teachers and students to achieve effective teaching-learning process

Distribution of Theory for course delivery					
Remember / Knowledge	Understand	Apply	Analyze	Evaluate	Higher order Thinking / Creative
10.00	15.00	40.00	35.00	0.00	0.00

Instructional Method:

- 1 The course delivery method will depend upon the requirement of content and need of students.
- 2 The trainer shall train students through interactions, demonstration, brainstorming, group tasks, assignments and quizzes etc.

Supplementary Resources:

- 1 www.indiabix.com
- 2 www.careerbless.com
- 3 www.allindiaexams.com
- 4 www.freshersworld.com