

Subject Code:01CR0402
Subject Name: Quantitative & Logical Ability - 2
B.Tech.Year–II (Semester IV)

Objective:

This course shall enrich students' preparedness for the upcoming competitive exams, entrance test, and/or placements. It will enhance the numerical skills of the students through the group interactions, practice sessions, and videos.

Credits Earned: 0 Credit

Course Outcomes: After completion of this course, students 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
- 5) Categorize various types of questions in terms of difficulty levels

Pre-requisite of course: Basic Knowledge of Mathematics

Teaching and Examination Scheme:

Teaching Scheme (Hours)			Credits	Theory Marks			Tutorial / PracticalMarks		Total Marks
				E	I		V	T	
Theory	Tutorial	Practical		ESE	IA	CSE	Viva	TermWork	
1	0	0	0	50	0	0	0	50	100

Contents:

Unit	Topics (QA)	Contact Hours
1	Introduction & Pre-Assessment Test	1
2	Vedic Maths – 1 (Multiplication tricks & Squaring of numbers) 2x2 digit numbers and 3x3 digit numbers <ul style="list-style-type: none"> - Numbers with the same ten's digit - Numbers near to 100 or multiple of 100 - Multiply by 5 or powers of 5 and multiply by 11 - 2-digit numbers, numbers ending with 5, numbers near to 100 etc 	1
3	Types of Numbers & Divisibility Test <ul style="list-style-type: none"> - Classification of types of numbers - Divisibility rules & examples 	1
4	Class Test 1 and doubt solving session	1
5	Factors & Multiples Multiples of given numbers and factor a number <ul style="list-style-type: none"> - Calculation total number of factors, odd number of factors and even number of factors - Factors related real life examples 	1
6	Cyclicity & Remainder <ul style="list-style-type: none"> - Unit digit of addition numbers or a product of numbers or an expression having numbers - Remainder Theorem - Mixed questions based on number theory and system 	1
7	HCF & LCM <ul style="list-style-type: none"> - Sub topics : Calculation of HCF and LCM - Find smallest & largest numbers divisible by given numbers - Common remainder & difference between number and remainder type - Calculation of LCM & HCF of Fraction Numbers 	2
8	Class Test 2 and doubt solving session	1
9	Average Sub topics : Simple average calculation Related examples Combined mean & weighted average Corrected mean & New mean	1
10	AP & GP <ul style="list-style-type: none"> - Arithmetic and Geometric Progression introduction - Arithmetic and Geometric Progression formulae & examples - Finding nth term and sum of nterm of AP and GP - Other examples related to AP and GP 	1

11	Problem Based on Ages/Numbers - Age and Number problems using one and two variables - Age and Number, average and ratio combined examples	1
12	Class Test 3 and doubt solving session	1
13	Revision	1
	Total Hours	14

Suggested Textbooks/ Reference books:

1. **Quantitative Aptitude** – By Dr. R. S. Agarwal, S. Chand, 2021.
2. **Quantitative Aptitude** – By Abhijit Guha, MC Graw Hills, 2020.
3. **Magical Book On Quicker Maths** – By 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 and effective teaching-learning process.

Distribution of Theory for course delivery and evaluation					
Remember	Understand	Apply	Analyze	Evaluate	Create
10%	15%	40%	35%	0%	0%

Instructional Method:

- a. The course delivery method will depend upon the requirement of content and need of students.
- b. The trainer shall train students through interactions, demonstration, brainstorming, group tasks, assignments and quizzes etc.
- c. Students will use supplementary resources such as online videos and books.
- d. The trainer shall train students through slides, worksheets and marker board.

Supplementary Resources:

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

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