Marwadi University

Syllabus for Bachelor of Technology

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

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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 - 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 - 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 - Calculation total number of factors, odd number of factors and even number of factors - Factors related real life examples	1
6	Cyclicity & Remainder - 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 - 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 - 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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