Gyanmanjari
Innovative University

Subject: Logical Reasoning - BBAXX14212

Type of course: Value Added Courses (VAC)

Prerequisite: Basic Mathematics rules, Basic of algebra, Number system, Geometry etc.

Rationale: Logical Reasoning helps individuals evaluate information, form logical arguments, and draw evidence-based conclusions.

Teaching and Examination Scheme:

Teaching Scheme			Credits	Examination Marks			Total Marks
				SEE	CCE		
CI	T	P	C		MSE	ALA	
2	0	0	2	50	20	30	100

Legends: *CI-Class Room Instructions;* ***T*** *– Tutorial;* ***P*** *- Practical;* ***C*** *– Credit;* ***SEE*** *- Semester End Evaluation;* *MSE-Mid Semester Examination;* ***V–Viva;*** ***CCE***-*Continuous and Comprehensive Evaluation;* *ALA- Active Learning Activities.*

2 Credits * 25 Marks = 50 Marks (each credit carries 25 Marks)
SEE 50 Marks will be converted in to 25 Marks
CCE 50 Marks will be converted in to 25 Marks
It is compulsory to pass in each individual component.

Course Content:

Unit No.	Course Content	Hrs	% Weightage
1	**Introduction to Logical Reasoning:** Understanding Logical Reasoning: Definition and importance in academic and professional contexts, Types of Reasoning: Deductive, Inductive and Abductive, Coding-Decoding: Conditional Coding and Word-Pattern Coding, Direction sense: Direction Sense Test, Direction Distance Test and Shadow-Based Test.	9	30

2	**Series, Numbers and Analogy:** Series & Numbers: Alphabet Series, Random Series, Number Series, Letter Gap, Missing Number Series, Series completion, Analogy: Word Analogy, Classification and Odd-out.	6	20
3	**Syllogism and Blood Relation:** Syllogism: Major-Minor premise and Conclusion, If-Else Statement, Logical Venn Diagram, Blood Relations: Indication Type BR and Coding BR.	9	30
4	**Logical Thinking Skills:** Seating Arrangement & Puzzles: Circular Seating Arrangement and Line Arrangement, Data Interpretation: Analyze Data and Draw Conclusion, Decision Making: Analyze Data and Assess Potential Outcomes.	6	20

Continuous Assessment:

Sr. No.	Active Learning Activities	Marks
1	**Vedic Mathematics** Students must prepare a Vedic mathematics shortcut chart for Logical Reasoning topics and submit it via the GMIU web portal.	10
2	**Chart** Students need to make and upload a syllabus-focused application chart to the GMIU web portal.	10
3	**Logical Reasoning Test** Students must participate in the Logical Reasoning test conducted by their subject teacher on the GMIU web portal.	10
	Total	30

Course Outcome:

After learning the course the students should be able to:	
CO1	Develop skills in formal reasoning and critical thinking by the principles and techniques of propositional logic, focusing on the formulation, evaluation, and application of logical statements and arguments.
CO2	Engage with real-world problems, using mathematical concepts to make informed decisions and solve practical issues.
CO3	Identify, analyze, and construct syllogisms, and develop critical thinking skills applicable in various contexts.
CO4	Enhance their verbal and non-verbal reasoning skills to improve their ability to analyze information, draw conclusions, and communicate effectively.

Suggested Specification table with Marks (Theory): 50

Level	Distribution of Theory Marks (Revised Bloom's Taxonomy)					
	Remembrance (R)	Understanding (U)	Application (A)	Analyze (N)	Evaluate (E)	Create (C)
Weightage	30%	30%	20%	10%	10%	-

Note: This specification table shall be treated as a general guideline for students and teachers. The actual distribution of marks in the question paper may vary slightly from above table.

Instructional Method:

The course delivery method will depend upon the requirement of content and need of students. The teacher in addition to conventional teaching method by black board, may also use any of tools such as demonstration, role play, Quiz, brainstorming, MCQ etc.

From the content 10% topics are suggested for flipped mode instruction.

Students will use supplementary resources such as online videos, NPTEL/SWAYAM videos, e-courses, Virtual Laboratory

Reference Books:

[1] "A Modern Approach to Verbal & Non-Verbal Reasoning" by R.S. Aggarwal

[2] "How to Prepare for Logical Reasoning for CAT" by Arun Sharma

[3] "Logic and Structure" by Daniel J. Velleman

[4] "Logic: A Very Short Introduction" by Graham Priest