

VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS), HYDERABAD
DEPARTMENT OF MATHEMATICS

COURSE NAME: Open Elective- Critical Reasoning
 (Open Elective) SYLLABUS FOR B.E. 3/4- VI SEMESTER

W.E.F-2023-2024

Instruction: 3 Hours	SEE: 60	Course code: U210E620MA
Credits: 3	CIE: 40	Duration of SEE: 3 Hours
COURSE OBJECTIVES The course will enable the learners to: <ol style="list-style-type: none"> 1. Identify the alternative solutions to the problem or case. 2. Derive solution or discuss the best solution(s) to the problem or case. 3. Discuss the conclusions that follow from the solution(s). Students will be trained to apply concepts like percentages and averages to solve complex problems. 4. Students will be trained to use effective methods like elimination of options and shortcuts to solve problem accurately. 5. Students will be trained to use effective methods like decision making and shortcuts to solve problems accurately. 		COURSE OUTCOMES At the end of the course the learners will be able to: - <ol style="list-style-type: none"> 1. Analyse and use techniques for Venn diagrams to solve questions effectively. 2. Demonstrate the difference between deductive and inductive reasoning. 3. Evaluate and distinguish between strong and weak assumption and conclusions. 4. Evaluate a select the right arguments from the given statements. 5. Evaluate and choose the right decision for the given situation

Unit- 1 Analyzing Datasets & Puzzles with Analytical Thinking

- 1.1 Set Theory/Data Sets/Venn Diagrams
- 1.2 Analogy
- 1.3 Classifications

Unit- 2 Logical Reasons & Logical Deductions

- 2.1 Analytical Puzzles
- 2.2 Logical Data Sequences
- 2.3 Logical Fact Deductions
- 2.4 Assertions & Reasons

Unit- 3 Essentials, Reactions, Causes & Data Adequacies/Inadequacies

- 3.1 Essential Part/Verification of Truth of Statements
- 3.2 Situation Reaction Test
- 3.3 Cause & Effect
- 3.4 Data Sufficiency

Unit- 4 Statements, Assumptions, Arguments & Conclusions

- 4.1 Statements & Assumptions
- 4.2 Statements & Arguments/Inferences/Analyzing Arguments
- 4.3 Statements & Conclusions
- 4.4 Analytical Reasoning

Unit- 5 Evaluations, Decisions & Making Judgements

- 5.1 Decision Making
- 5.2 Making Judgements
- 5.3 Evaluating Course of Action

Prescribed textbook for theory:

1. A Modern Approach to Verbal & Non-Verbal Reasoning S.CHAND by Dr. R S Aggarwal

Suggested Reading

1. Learn.talentsprint.com/References Courses
2. LOGICAL Reasoning Disha Publications

The break-up of CIE: Internal Tests + Assignments + Quizzes

1	No. of Internal tests	:	<input type="text" value="2"/>	Max. Marks	:	<input type="text" value="30"/>
2	No. of assignments	:	<input type="text" value="3"/>	Max. Marks	:	<input type="text" value="5"/>
3	No. of Quizzes	:	<input type="text" value="3"/>	Max. Marks	:	<input type="text" value="5"/>

Duration of Internal Tests : 90 Minutes