Institute/ School Name	School of Engineering and Technology		
Department Name	Department of Computer Science & Engineering		
Program Name	Bachelor of Engineering (Computer Science & Engineering): B.E (CSE)		
Course Code	25CL005	Course Name	Verbal Ability and Logical Reasoning
L-T-P (Per Week)	4-0-0	Course Credits	04
Academic Year	2025-26	Semester/Batch	5th /2023-27
Course Coordinator	Dr. Praveen Kantha		

1. Course Outline:

Revision of concepts of number system, average, HCF and LCM. Understanding of blood relation, simplification, remainder theorem, Analogy, ratio and proportion, problem based on ages, Allegation, Syllogism, Percentage, Coding-Decoding. Practice problems on simple interest, compound interest, profit and loss, series, time and work. Problems on mixed proportion, time sequence, time, speed and distance, permutation and combination, probability, area calculation, volume, triangle, critical thinking. Representation using graphs, Algebra, Quadratic Equation. Understanding of non-verbal, verbal English.

2. Programme Outcomes (POs):

At the end of the programme, students will be able to achieve knowledge about the following:	
PO 1	**Engineering knowledge**: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
PO 2	**Problem analysis**: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
PO 3	**Design/development of solutions**: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
PO 4	**Conduct investigations of complex problems**: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
PO 5	**Modern tool usage**: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modelling to complex engineering activities with an understanding of the limitations.
PO 6	**The engineer and society**: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
PO 7	**Environment and sustainability**: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
PO 8	**Ethics**: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
PO 9	**Individual and teamwork**: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
PO10	**Communication**: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
PO11	**Project management and finance**: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
PO12	**Life-long learning**: Recognize the need for and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

3. Course Learning Outcomes (CLOs):

After completing the course, the student will be able to:

CLO1: Demonstrate proficiency in reading and comprehending written English passages to build critical reading and interpretation skills.

CLO2: Communicate ideas clearly and accurately in both written and spoken English, enhancing verbal articulation, grammar accuracy, and professional communication skills.

CLO3: Analyze and construct sound arguments using deductive and inductive reasoning to develop analytical thinking and logical structuring skills.

CLO4: Apply principles of logical reasoning to solve complex problems, fostering problem-solving, decision-making, and quantitative reasoning skills.

CLO5: Enhance their ability to clear the aptitude round in the interview process by strengthening verbal reasoning, logical aptitude, and employability-focused communication skills.

4. CLO-PO Mapping Matrix:

Course Learning Outcomes	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CLO1	M	M		M								
CLO2	M	H									M	L
CLO3		H							H	M		
CLO4				H				H			L	L
CLO5	L									M		

5. ERISE Grid Mapping:

Feature Enablement	Level (1-5, 5 being highest)
Entrepreneurship	2
Research/Innovation	1
Skills	5
Employability	4

6. Recommended Books (Reference Books/Textbooks):

B01: Aggarwal, R. S. (Latest Edition). Quantitative aptitude for competitive examinations (Fully video ed., Rev. ed. 2024–25). S. Chand & Company Pvt. Ltd.

B02: Sharma, A. (2nd Edition). How to prepare for logical reasoning for CAT. Tata McGraw-Hill Education.

B03: Experts, D. Shortcuts in reasoning: Verbal, non-verbal, analytical & critical (3rd Edition). Disha Publications

7. Other readings and relevant websites:

Resources	Link of Journals, Magazines, Websites and Research papers
R1	https://www.indiabix.com/logical-reasoning/questions-and-answers/
R2	https://link.springer.com/article/10.1007/s10763-019-10039-8
R3	https://www.practiceaptitudetests.com/logical-reasoning-test.pdf
Resources	**Link of Audio-Video resources**

V1	https://www.youtube.com/watch?v=2_TmPm3lzS0
V2	https://www.youtube.com/watch?v=xKpna95IEZ0
V3	https://www.udemy.com/course/reasoning-for-competitive-exams/
V4	https://www.youtube.com/watch?v=uLgVyGMwk34

8. Recommended Tools and Platforms:

- Mobile App: https://play.google.com/store/apps/details?id=com.eteachnow.mockopedia

9. Course Plan:

Lecture Number	Topics	Weightage in ETE (%)	Instructional Resources
1-4	VERBAL ABILITY Sentence Improvement Reading Comprehension Cloze Test 4 Sentence Re- Arrangements	15	B01, V4, R1
5-6	WORD POWER Fill in the Blanks Theme Detection Analogy VOCAB Synonyms Words often confused & misused		B01, V1, R2
7-10	GRAMMAR Noun Pronoun Adjectives Tenses Verb Subject + Verb Agreement Adverb Preposition Article Conjunction		B01, R1, V1, V3
11-14	Blood Relation Coded Relation Remainder Thm. Number System	20	B01, R1, R2
15-18	Analogy HCF And LCM		B01, R1, R2
19-24	Direction Average		B01, R1, R3, V4
25-29	Ratio & Proportion Problem based on Ages Partnership		B01, R1, V2
30-33	Odd Man Out Alligation Syllogism	20	B01, V1, R2, R3
34-38	Percentage Alphabet Test Mathematical Operation		B01, B02, V4, R3
39-44	Coding - Decoding SIMPLE INTEREST		B01, B02, V1
45-48	Compound Interest Number Sequence Profit & Loss	15	B01, R2

49-51	Discount Series AP And GP	15	B01, R2, V3
52-54	Time and Work Pipe and Cistern Mixed Proportion		B01, R1
55-57	Work & Wages Ranking Cube & Cuboid	15	B01, B02
58-60	Calendar Clock Time sequence		B01, V3, R3

10. Industry Interventions:

- NA

11. Action plan for different types of learners

Slow Learners	Average Learners	Advanced Learners
Remedial Classes	Practice Assignment	Advanced Problems

12. Evaluation Scheme & Components:

Evaluation Component	Type of Component	No. of Assessments	Weightage of Component	Mode of Assessment (Offline/Online)
Internal Component 1	Formative Assessments (FAs)	04*	20%	Online***
Internal Component 2	Sessional Tests (STs)	02**	30%	Online***
External Component	End Term Examination (ETEs)	01	50%	Online***
Total		**100%**		

* Out of the four, the best three will be considered to evaluate final marks.
** Out of the two STs, the best 01 will be considered.
*** Proctored examination will be conducted on Testpad platform.

13. Details of Evaluation Components:

Evaluation Component	Description	Syllabus Covered (%)	Timeline of Examination	Weightage (%)
Internal Component 1	FA1	Up to 25% (Lectures 1-15)	Week 3	20%
	FA2	26%-50% (Lectures 16-30)	Week 4	
	FA3	51%-75% (Lectures 31-45)	Week 7	
	FA4	76% to 100% (Lectures 46-60)	Week 9	
Internal Component 2	ST 01	Upto 40% (Lectures 1-24)	Week 6	30%
	ST 02	41% - 80% (Lectures 25-48)	Week 10	
External Component	End Term Examination*	100%	As Notified by the Exam Cell	50%
Total				100%

*Minimum 75% attendance is required to become eligible for appearing in the End Term Examination

14. Format of Evaluation Components:

Type of Assessment	Total Marks	1 Mark MCQ	2 Marks MCQ	5 Marks Coding	10 Marks Coding
Formative Assessment	20	20	-	-	-
Sessional Tests	30	60	-	-	-
End Term Examination	50	100	-	-	-

15. Revision (if any):

Academic Year of Previous Version	2024-2025	Percentage of Revision	10%

Topics Added:

- Alphabet Test
- Mathematical Operation
- Mixed Proportion
- Calendar
- Clock
- Time Sequence

Topics Deleted:

- The Train
- Boat and Stream
- P and C Introduction
- Probability
- Polynomial
- Logs

16. This Document is:

Designation	Name	Signature
Prepared by Course Coordinator	Dr. Praveen Kantha	P. Kantha
Verified by Assistant Dean	Dr. Ashutosh Kumar Dubey | Ms. Ravita Chahar	
Approved by Pro VC	Prof. (Dr.) Meenu Khurana	Meenu
Date	23rd June 2025	