ECHELON INSTITUTE OF TECHNOLOGY, FARIDABAD

Affiliated to J.C. Bose University of Science and Technology, YMCA, Faridabad

Department of Computer Applications

Assignment No- 02 (Even Semester 2024- 2025)

Course: BCA-DS-6th

Date of Issue: 09.05.2025	Date of Submission: 14.05.2025
Subject: Employability skills	Course Code- BCA-DS-313
Course unit included: 1 & 2	Maximum Marks: 20

COURSE OUTCOMES: On completion of the course: the students will be able to:

CO1. Review and evaluate your personal attributes and employability skills which are necessary for successful employment and career development.
CO2. Investigate employment opportunities, complete a job application including a CV for for a specific job opportunity.
*Note- Only mathematical portion
Attempt all the questions

Sr No.	Questions	CO	RBT Level	Marks
	Q1. Explain the structure and rules for solving **calendar-based problems**. Solve two standard problems involving leap years and day calculations.	CO1	3	5
	Q2. Define **syllogism**. Explain the types of conclusions derived using Venn diagrams. Solve two examples with valid reasoning.	CO1	2	5
	Q3. (a) Construct and interpret truth tables for each connective. Analyze the concept of **logical connectives** (AND, OR, NOT, IF–THEN). (b) Venn Diagram-based categorization –In a class of 50 students: 30 like Mathematics (M), 25 like Physics (P) & 10 like both Mathematics and Physics How many students like only Mathematics, only Physics, and neither subject?	CO2	4	5
	Q4. Solve the following(Include explanation steps) (a) Blood Relations Puzzle-Pointing to a man in a photograph, Seema said, "He is the son of the only son of my grandfather." How is the man in the photograph related to Seema? (b) Cubes and Dice visualization- A cube is painted red on all six faces. It is then cut into 64 smaller cubes of equal size. (i) How many cubes will have no red face? (ii) How many will have exactly one red face?	CO2	3	5