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School of Engineering Sciences and Technology
Department of Computer Science & Engineering

Subject: Programming for Problem Solving

Subject Code: BTCSE-103

Odd Semester Examination-2024 (For 1st Year Students)

TIME: 2 Hours 30 Minutes

MAX. MARKS: 60

SECTION - A (20 Marks)

❖ All questions are compulsory. Each question is of 5 marks.

Q. No.	Questions	CO*	BL*
1.	What is the work of compiler? Differentiate between compilation and interpretation process.	CO1	L2
2.	Write an explanatory note about Data Types in C programming. Make a table of size and range for all the data types including signed and unsigned.	CO1	L2
3.	Define recursion. Write a program to compute greatest common divisor (GCD) of given two integer numbers using a recursive function.	CO4	L6
4.	What is searching? Write a program to search an integer number in an array using binary search.	CO3	L6

SECTION - B (40 Marks)

❖ Attempt any FOUR questions. Each question is of 10 marks.

Q. No.	Questions	CO*	BL*
1.	Solve the following conversions: a) $(35679)_{10} = (?)_2 = (?)_8 = (?)_{16}$ b) $(65377)_8 = (?)_{10} = (?)_{16}$	CO1	L5
2.	a) What is a file in C programming? Explain in detail. b) Write a program to copy the contents of one file to another file.	CO5	L6
3.	Explain all the operators used in C programming in detail with proper examples.	CO2	L2
4.	Write two separate programs to explain the concept of call by value and call by reference in detail.	CO3	L6
5.	Write a program using loop to generate following pattern on the monitor. <pre> 1 1 3 1 1 3 5 3 1 1 3 1 1 </pre>	CO2	L6
6.	Explain the following concepts in detail with proper examples: a) Pointer in C programming b) Dynamic Memory Allocation c) Structure and Union d) Storage Classes	CO4	L2

CO* - Course Outcomes from Syllabus, BL* - Bloom's Taxonomy Levels (1: Remembering, 2: Understanding, 3: Applying, 4: Analyzing, 5: Evaluating, 6: Creating)

END