BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI
(END SEMESTER EXAMINATION)

CLASS: MSC   SEMESTER : IV
BRANCH: MATHEMATICS   SESSION : MO/2023

SUBJECT: CA401 PROGRAMMING WITH C

TIME: 3 Hours   FULL MARKS: 50

INSTRUCTIONS:
1. The question paper contains 5 questions each of 10 marks and total 50 marks.
2. Attempt all questions.
3. The missing data, if any, may be assumed suitably.
4. **Before attempting the question paper, be sure that you have got the correct question paper.**
5. Tables/Data hand book/Graph paper etc. to be supplied to the candidates in the examination hall.

			CO	BL
Q.1(a)	Discuss software development method with the help of example of finding area of a triangle when coordinates of vertices of a triangle is given	[5]	1	2
Q.1(b)	Explain flowchart, its type and symbols with help of examples	[5]	1	1
Q.2(a)	Explain top-down approach with example	[5]	2	1
Q.2(b)	Explain with examples how for loop can be converted into while loop and vice versa .	[5]	2	2
Q.3(a)	Differentiate between call by value and call by reference with example.	[5]	3	2
Q.3(b)	Write a C program to find addition of two matrices using 2-d array.	[5]	3	2
Q.4(a)	Differentiate between character array and strung literals. Write a C program to find frequency of characters in a string.	[5]	4	2
Q.4(b)	Define recursive function and list out its merit and demerits. Write a C program to find GCD of number using recursion.	[5]	4	2
Q.5(a)	Discuss structure pointer with examples.	[5]	5	2
Q.5(b)	Define structure for three dimension vector and do addition of two vectors and scalar multiplication.	[5]		

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