CBCS SCHEME

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BESCK204E/BESCKE204

Second Semester B.E./B.Tech. Degree Examination, Dec.2023/Jan.2024
Introduction to 'C' Programming

Time: 3 hrs. Max. Marks: 100

Note: 1. Answer any FIVE full questions, choosing ONE full question from each module.
2. VTU Formula Hand Book is permitted.
3. M : Marks , L: Bloom's level , C: Course outcomes.

		Module – 1	M	L	C
Q.1	a.	Explain the structure of C program with example.	10	L2	CO1
	b.	Define variable and explain the rules for defining variable and classify the following as valid and invalid variables. Num1, 1num, $sum, _Area, Area_Circle, +add, #12, 199_Spam_apple, a_2?	10	L2	CO1
		OR			
Q.2	a.	Explain the steps for compiling and executing C program with neat flowchart.	10	L2	CO1
	b.	Explain the formatted input and output statements in 'C' with neat syntax and example.	10	L2	CO1
		Module – 2			
Q.3	a.	List the different types of operators and explain each of them.	10	L2	CO2
	b.	Explain if, if...else and ladder if...else statement with syntax and example program.	6	L2	CO2
	c.	Demonstrate the use of switch statement with syntax and example.	4	L2	CO2
		OR			
Q.4	a.	Demonstrate the use of breaks and continue statement with suitable example program. Write a 'C' program to check if a given number is prime order.	8	L3	CO2
	b.	Generate the following pyramid with a C code A A B A A B C B A A B C D C B A	5	L3	CO2
	c.	Differentiate between while and do...while loop. Write a 'C' program to find the number of digits in a given number.	7	L3	CO2
		Module – 3			
Q.5	a.	Explain the various storage class specifiers used in C.	6	L2	CO5
	b.	Distinguish between call by value and call by reference using suitable example.	10	L2	CO5
	c.	Write the array declaration and initialization with examples.	4	L2	CO3

		OR			
Q.6	**a.**	Develop a C program to multiply the two matrices and validate the rules of multiplication.	**10**	**L3**	**CO3**
	b.	Write a C program to generate Fibonacci series using recursion.	**6**	**L3**	**CO5**
	c.	Write a C program to find factorial of a given number using recursion.	**4**	**L3**	**CO5**
		Module – 4			
Q.7	**a.**	Explain with a neat syntax string I/O functions.	**6**	**L2**	**CO3**
	b.	Explain the use of scanset function.	**4**	**L2**	**CO3**
	c.	Write the functions to implement string operations such as compare, concatenate, string length with parameter passing technique.	**10**	**L2**	**CO3**
		OR			
Q.8	**a.**	Explain the string handling functions with neat syntax. (Minimum 5).	**10**	**L2**	**CO3**
	b.	Demonstrate the two dimensional array declaration and initialization.	**4**	**L2**	**CO3**
	c.	Write a C program that reads a matrix and display the sum of all the elements of matrix.	**6**	**L3**	**CO3**
		Module – 5			
Q.9	**a.**	Define pointer. And explain how the pointers are declared and initialized.	**7**	**L2**	**CO4**
	b.	Define structure. And explain how the structures and structure variables are declared.	**7**	**L2**	**CO4**
	c.	List and explain the character handling functions with example.	**6**	**L2**	**CO3**
		OR			
Q.10	**a.**	Write a 'C' program to swap two integers using pointers.	**6**	**L3**	**CO4**
	b.	Differentiate between arrays and structures with suitable example.	**6**	**L2**	**CO4**
	c.	Implement a C program on structure to read, write and compute average marks and the students scoring above and below the average marks for a class of 'N' students.	**8**	**L3**	**CO3**

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