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EAST POINT COLLEGE OF ENGINEERING & TECHNOLOGY
An Autonomous Institution Affiliated to Visvesvaraya Technological University (VTU) Belagavi

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25CS13/25CS23

First/Second Semester B.E. Degree Examination, June/July 2026
PROGRAMMING IN C

TIME:3 hrs. Max.Marks:100

Note: 1. Answer **any FIVE** full questions, choosing **ONE** question from **each MODULE.**
2. M: Marks, L: Bloom's level,C: Course outcomes.
3. Assume missing data suitably.

		Module-1	M	L	C
Q.1	a	What are basic data types available in c? Write the significance of each data type	7	L2	CO1
	b	What is an operator? List and explain various types of operators with examples.	7	L2	CO1
	c	Differentiate between compiler and interpreter with examples.	6	L2	CO1
		OR			
Q.2	a	What is an identifier (variable)? What are the rules to construct identifier (varible)? Classify the following as valid/invalid Identifiers. i) num2 ii) $num1 iii) +add iv) a_2 v) 199_space vi) _apple vii)#1	6	L2	CO1
	b	Define variable. List and explain various types of variables in C language	8	L2	CO1
	c	Describe the structure of a C program with a neat example.	6	L2	CO1
		Module–2			
Q.3	a	Explain formatted input and output functions in C (printf, scanf) with examples.	7	L2	CO2
	b	List all conditional control statements used in C. Explain any two with syntax and example	6	L2	CO2
	c	Write a C program to check whether a number is prime or not.	7	L3	CO2
		OR			
Q.4	a	What is two way selection statements? Explain if, if else, and cascaded if-else with examples.	8	L2	CO2
	b	What is an expression? Evaluate the following expressions i)100 % 20 < = 20 – 5 + 100 % 10 – 20 = = 5 > = 1 != 20 ii) a + = b * = C - = 5 where a=3 b=5 and c=8	5	L3	CO2
	c	Write a C program to find the largest of three numbers using if-else.	7	L3	CO2
		Module–3			
Q.5	a	What is array ? Explain the declaration and initialization of one dimensional and two dimensional array with an example	10	L2	CO3
	b	What is string ? Write a C program that reads a sentence and prints the frequency of each of the vowels and total count of consonants.	6	L3	CO3
	c	Write a C Program to implement string copy operation STRCOPY(str1,str2)	4	L3	CO3

		OR			
Q.6	**a**	How string is declared and initialized? Explain any five string manipulation functions with examples	**10**	**L2**	**CO3**
	b	What is a pointer? Write a C program to find the sum and mean of all elements in an array using pointer	**10**	**L3**	**CO3**
		Module–4			
Q.7	**a**	What is function? Explain the type of functions based on parameters	**10**	**L2**	**CO4**
	b	Write a program in C using functions to swap two numbers using global variables concept and call by reference concept.	**5**	**L3**	**CO4**
	c	What are actual parameters and formal parameters? Illustrate with example	**5**	**L3**	**CO4**
		OR			
Q.8	**a**	Write a C program using recursion to find factorial of a number.	**5**	**L3**	**CO4**
	b	Define a recursion . Write a C recursive function for multiplying two integers where a function call is passed with two integers m and n	**10**	**L3**	**CO4**
	c	Write a C program to find the binomial co-efficient a number using recursion	**5**	**L3**	**CO4**
		Module–5			
Q.9	**a**	Define structure. Explain arrays of structures with example.	**6**	**L2**	**CO5**
	b	Explain passing structures to functions with suitable example.	**6**	**L2**	**CO5**
	c	Write a C program to store and display student details using structure pointer.	**8**	**L3**	**CO5**
		OR			
Q.10	**a**	Explain unions and bit-fields with example.	**6**	**L2**	**CO5**
	b	Explain enumerations and typedef with examples.	**6**	**L2**	**CO5**
	c	Write a C program to demonstrate nested structures and use of sizeof for portability	**8**	**L3**	**CO5**

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