USN	1	C	D	1	8	C	S	1	0	6

CAMBRIDGE INSTITUTE OF TECHNOLOGY

K.R. PURAM, BENGALURU-560036

Department of Basic Sciences

Program: B.E. ■ M.Tech. ☐ Specialization:

Preparatory Examination - Even Semester 2018-19

Sub. Name: C Programming for Problem Solving **Sub. Code**: 18CPS23 **Semester**: II

Date: 11-06-2019 **Time:** 1:15 PM **Duration**: 3 Hours **Max. Marks**: 100

[Instructions: Answer any five full questions, choosing one from each module, each full question carries maximum 20 marks]

Sl. No	QUESTIONS	COs	RBT Levels	Marks
	Module I			
1.	a) List the various generations of computer.	CO1	L1	04M
	b) Explain any four operators in C with an example for each.	CO1	L2	08M
	c) Explain declaration and initialization of variables in C with an example.	CO1	L2	08M
	OR			
2.	a) What is an output device? Explain any two output devices.	CO1	L1	04M
	b) Explain type conversion in C with suitable examples.	CO1	L2	08M
	c) Show the evaluation of the following C expressions: i) If a=3, d=7, e=2, c=5, b=4, x = --a*d/e-c++ * b, find a, b, c, d, e, x. ii) If x=4, y=3, z=2, m = ++x + --y + z++ + --z, find m, x, y, z.	CO1	L2	08M
	Module II			
3.	a) List the different types of looping statements in C language.	CO2	L1	04M
	b) With syntax and example program explain the following: i) if else ii) nested if else.	CO2	L2	08M
	c) Write a simple calculator program in C language to do simple operations like addition, subtraction, multiplication and division. Use switch statement in the program.	CO2	L3	08M

Scanned by CamScanner

	OR			
4.	a) Write a C program to find the sum of even numbers of first N natural numbers using do while loop.	CO2	L1	04M
	b) Explain in detail the formatted and unformatted input and output functions in C.	CO2	L2	08M
	c) Write a C program to reverse a given 4 digit integer number and check whether it is palindrome or not.	CO2	L3	08M
	Module III			
5.	a) How do we store a one dimensional array in memory?	CO3	L1	04M
	b) Explain the declaration and initialization of one dimensional (1–D) array with examples.	CO3	L2	08M
	c) Write a C program to search an element in an array using linear search.	CO3	L3	08M
	OR			
6.	a) What is a string? Give its declaration with suitable examples.	CO3	L1	04M
	b) Explain any six string handling functions with syntax and examples.	CO3	L2	08M
	c) Write a C program to sort the elements in an array using bubble sort.	CO3	L3	08M
	Module IV			
7.	a) State the differences between local and global variables.	CO4	L1	04M
	b) Explain in detail the elements of a user defined functions.	CO4	L2	08M
	c) Write a C program using functions: i) To check if a number is prime or not ii) To concatenate two strings without using library function.	CO4	L3	08M
	OR			
8.	a) List the advantages of user defined functions.	CO4	L1	04M
	b) Explain parameter passing techniques in user defined functions.	CO4	L2	08M
	c) Write a C program using recursion: i) To find the binomial coefficient of a number ii) To display the Fibonacci series up to n.	CO4	L3	08M

Scanned by CamScanner

	Module V			
9.	a) What is a preprocessor directive? List its categories.	CO4	L1	04M
	b) Explain how a structure variable is passed as parameter to a function with an example.	CO4	L2	08M
	c) Write a C program to implement structure for reading, writing and computing average marks of n students in a class. Also, display the names of students scoring above and below the average marks for a class of n students.	CO4	L3	08M
	OR			
10.	a) What is a character pointer?	CO4	L1	04M
	b) Explain the declaration and initialization of pointers. Write a C program using pointers to compute sum, mean and standard deviation of all elements stored in an array of n real numbers.	CO4	L2	08M
	c) Write a C program for the following: i) Cube of a number using nesting of macros ii) Largest of 3 numbers using macro nested call.	CO4	L3	08M

Scanned by CamScanner