CAMBRIDGE INSTITUTE OF TECHNOLOGY
K.R. Puram Bengaluru – 36

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Principles of Programming using C – BPOPS103

PREPARATORY QUESTION BANK

C123.1 - Elucidate the basic architecture and functionalities of a computer and also recognize the hardware parts.

C123.2 - Apply programming constructs of C language to solve the real world problem

C123.3 Explore user-defined data structures like arrays in implementing solutions to problems like searching and sorting.

C123.4 Explore user-defined data structures like structures, unions and pointers in implementing solutions

C123.5 Design and Develop Solutions to problems using modular programming constructs using functions.

Sl.No	Questions	CO	RBT
1	Explain the following conditional statements with syntax and example program for each. i) if ii) if-else iii) else-if ladder iv) nested if –else v) switch	2	2
2	Write a simple calculator program in C language to do simple operations like addition, subtraction, multiplication and division. Use switch statement in your program.	2	3
3	Write a C program to compute the roots of a quadratic equation by accepting the coefficients.	2	3
4	Explain the following operators with an example program: i) Relational ii) increment/decrement iii) sizeof iv) Arithmetic v) logical iv) bitwise	2	2
5	Explain the working of break, continue statement with a suitable example.	2	2
6	Compute sin(x) using Taylor series approximation. Compare your result with the built-in library function. Print both the results with appropriate inferences.	2	3
7	Explain the following looping statements with syntax and example	2	2

	program. i) while ii) do-while iii) for.		
8	Explain how to declare and initialize a string with examples.	3	2
9	Explain all the string handling functions with syntax and example program for each.	3	3
10	Write a C program to check if the input string is palindrome or not. i) with built-in function ii) without built-in function	3	3
11	Explain how to declare and initialize array of strings with examples.	3	2
12	Write functions to implement string operations such as compare, concatenate, and find string length. Use the parameter passing techniques.	3	3
13	Define pointer variable. State its uses. Explain with example the declaration and initialization of pointer variable.	4	2
14	Write a C program using pointers to compute sum, mean and standard deviation of all elements stored in an array of n real numbers.	4	2
15	Explain all the steps used to open a file in C language.	4	2
16	Explain all the functions used to read from a file in C language.	4	2
17	Explain all the functions used to write to a file in C language.	4	2
18	Write a C program to copy a text file to another, read both the input file name and target file name.	4	3
19	Explain Structure definition, declaration, accessing and initialization of structures with suitable example.	4	2
20	Implement structures to read, write and compute average- marks of the students, list the students scoring above and below the average marks for a class of N students.	4	3
21	Differentiate structures and unions.	4	2
22	Explain enumerated datatype in C language.	4	2