**POORNIMA UNIVERSITY, JAIPUR**

**END SEMESTER EXAMINATION, December 2022**

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|  | **1BT1250** | Roll No. | Total Printed Pages: 1 |
| **1BT1250** |  |
| B. Tech. I Year I-Semester (Back) End Semester Examination, December 2022 | |
| **BTXCCE1103 / BCECCE/BADCCE/BCCCCE/BCSCCE1103 : Fundamentals of Computer** | | | |

# Time: **3** Hours. Total Marks: **60**

Min. Passing Marks: **21**

Attempt **five** questions selecting one question from each Unit. There is internal choice from Unit I to Unit V. Marks of each question or its parts are indicated against each question / parts. Draw neat sketches wherever necessary to illustrate the answer. Assume missing data suitably (if any) and clearly indicate the same in the answer.

Use of following supporting material is permitted during examination for this subject.

# **1.--------------------------Nil--------------------** **2.------------------Nil-----------------------**

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|  |  | **UNIT-I (CO1)** | **Marks** |
| **Q.1** | **(a)** | Write overview and history of C language. | **(2)** |
|  |  |  |  |
|  | **(b)** | List logical operators and write C Program to demonstrate working of these logical operators.  What is the role of Header files in C program? | **(6+4)** |
|  |  | **OR** |  |
| **Q.2** | **(a)** | Explain the basic structure of C program, with an example. | **(6)** |
|  |  |  |  |
|  | **(b)** | What do you mean by Flow Chart? Explain the components of a flow chart. | **(6)** |
|  |  | **UNIT-II (CO2)** |  |
| **Q.3** | **(a)** | Explain switch case statement with syntax and suitable example. | **(6)** |
|  |  |  |  |
|  | **(b)** | Write a C program to find the sum of n numbers using while loop. | **(6)** |
|  |  | **OR** |  |
| **Q.4** | **(a)** | Write a C program to find all possible roots of quadratic equation and print them with appropriate messages. | **(8)** |
|  |  |  |  |
|  | **(b)** | Explain how while is different from do-while statement? | **(4)** |
|  |  | **UNIT-III (CO3)** |  |
| **Q.5** | **(a)** | What is Recursive function? Write a program to find factorial of an integer number by using recursive function. | **(6)** |
|  |  |  |  |
|  | **(b)** | What is call by value? How it is different from call by reference? Write and explain ‘C’ language program to implement the concept of call by value and call by reference. | **(6)** |
|  |  | **OR** |  |
| **Q.6** | **(a)** | Write a C function isprime(num) that accepts an integer argument and returns 1 if the argument is prime, 0 otherwise. Write C program that invokes this function to generate prime numbers between given range. | **(8)** |
|  |  |  |  |
|  | **(b)** | Explain all storage classes in C language. | **(4)** |
|  |  | **UNIT-IV (CO4)** |  |
| **Q.7** | **(a)** | What is a structure? Explain structure with syntax and example. | **(4)** |
|  |  |  |  |
|  | **(b)** | Write a program to multiply two 2x2 matrix. | **(8)** |
|  |  | **OR** |  |
| **Q.8** | **(a)** | Write a C program to maintain record of n students using structures with 4 fields (Rollno, marks, name and grade). Print the names of students with marks>=60. | **(8)** |
|  |  |  |  |
|  | **(b)** | What is a Pointer? Explain how pointer variable is declared and initialized. | **(4)** |
|  |  | **UNIT V (CO5)** |  |
| **Q.9** | **(a)** | Write a program to create a file and display its contents.  Assume suitable data. | **(6)** |
|  |  |  |  |
|  | **(b)** | Write a program to concatenate two strings without using library function. | **(6)** |
|  |  | **OR** |  |
| **Q.10** | **(a)** | Explain about fopen(), feof(), fflush(), and fclose() functions. | **(4)** |
|  |  |  |  |
|  | **(b)** | Write a C program to reverse a string. | **(8)** |