

B.Sc.(IT) Semester - 1 (CBCS) Examination
Nov/Dec - 2022 (NEW COURSE)
PROGRAMMING IN C(CORE)

Time: 2:30 Hours**Marks: 70****Instructions:**

1. All questions are compulsory.
 2. Figures to the right indicate marks.
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Q.1**(a) Attempt the following****[3]**

1. Define type casting
2. _____ operator is used to join two conditions, each of which must be true
3. What is an identifier?

(b) Attempt any two**[6]**

1. Explain the differences between traditional C and Modern C
2. List various data types. Explain each with example
3. List various relational operators. Explain any one with example.
4. Explain giving example : ternary operator

(c) Attempt any one**[5]**

1. List various Logic development techniques. Explain the usefulness of each.
2. Write in detail with example : Flow Chart

Q.2**(a) Attempt the following****[3]**

1. 'continue' keyword lets you terminate the current loop : (True/False)
2. What is decision structure?
3. Give example of an exit controlled loop

(b) Attempt any two**[6]**

1. Explain with syntax and example : goto
2. Differentiate between : entry controlled loop and exit controlled loop
3. Explain if – elseif ladder with example
4. Explain with syntax and example : switch-case

(c) Attempt any one**[5]**

1. Write a C program to decide whether the entered number is an odd number or an even number or a prime number. Display appropriate message.
2. Write a C program to take input of a four digit number. Generate its reverse and print both the numbers.

Q.3**(a) Attempt the following****[3]**

1. _____ function is used to decide whether the entered value is alpha-numeric or not
2. What is the use of fflush() function?
3. _____ function is used to calculate the square root of a given number

(b) Attempt any two**[6]**

1. What is a header file? Explain its usefulness in C programming
2. List various string functions. Explain any one with syntax and example
3. Explain with syntax and example : malloc()
4. What is UDF? Explain in detail all the types of UDF

(c) Attempt any one**[5]**

1. List and explain various storage classes in detail
2. Differentiate : function call by value and call by reference. Give appropriate example

Q.4**(a) Attempt the following****[3]**

1. Structure is a mechanism which allows to define your own data type : (True/False)
2. Define array
3. To input names of five students, we should declare an array with _____ dimensions

(b) Attempt any two**[6]**

1. What is string array? Explain with example
2. Explain with syntax and example : array within structure
3. Explain the concept of multi-dimensional array
4. Differentiate between structure and union

(c) Attempt any one**[5]**

1. Write a C Program to create a structure 'result'. It should contain the following items:
Marks of three subjects, total marks, percentage.
Take the input of marks in a nested structure 'marks'. Take inputs of 10 students and display the result along with calculated percentage
2. Write a C program to show the use of array of structures

Q.5**(a) Attempt the following****[3]**

1. A pointer cannot point to a constant : (True/false)
2. _____ function is used to know the current file pointer position
3. To declare a pointer to point to a structure 'class', it must be declared with the data type _____

(b) Attempt any two**[6]**

1. Explain the usefulness of pointer to an array with example
2. Discuss in detail : pointer to pointer
3. What are command line arguments? Explain with example
4. Explain in detail the importance of data files in C programming

(c) Attempt any one**[5]**

1. Write a C program to create a file named 'stud.txt'. Write into it roll numbers and names of 10 students. Search for the student whose roll number is 5. Display his name and position(in bytes)
2. Write a C program to show the use of array of pointers.
