RAN-2311001101010001

B.Sc. (I.T.) (Sem. I) Examination December - 2023

Paper : 104 - Fundamentals of Programming Using C.1

[Total Marks: 50

સૂચના : / Instructions

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નીચે દર્શાવેલ ☛ નિશાનીવાળી વિગતો ઉત્તરવહી પર અવશ્ય લખવી.
Fill up strictly the details of ☛ signs on your answer book

Name of the Examination:

☛ **B.Sc. (I.T.) (Sem. I)**

Name of the Subject :

☛ **Paper : 104 - Fundamentals of Programming Using C.1**

Subject Code No.: **2311001101010001**

Seat No.:

Student's Signature

Q-l   Do as directed: (Any 10)   [10]

1) What will be output of the following Code?

```c
#include<stdio.h>
int main()
{
        char s[20] = "Hello\0Hi";
        printf("%d %d", strlen(s), sizeof(s));
        return 0;
}
```

2) _____ is a value that does not change throughout the program.

3) We can pass float type value in a switch statement - True or False.

4) If integer needs two bytes of storage, then maximum value of an unsigned integer is _____ .

5) _____ is a unary operator which gives the address of a variable.

6) What will be output of the following program?

```
int main()
{
    int i;
    int arr[5] = {1};
    for (i = 0; i < 5; i++)
    printf("%d ", arr[i]);
    return 0;
}
```

7) _____ function in <string.h> is used to calculate the total no. of characters in a string.

8) Which keyword is written before an integer to read only positive numbers in C?

9) _____ keyword is used to rename datatype in C.

10) What will be output of the following code?

```
int main()
{
    int i=4, j=-1 ,k=0, w,x,y,z;
    w=i || j || k;
    x=i && j && k;
    y=i || j && k;
    z= i && j || k;
    printf("\n w= %d x= %d y= %d z= %d",w,x,y,z);
    return 0;
}
```

11) What is the output for the following code?

```
int main ()
{
    int a=5;
    while (a==5)
    {
        printf ("RABBIT") ;
        break;
    }
    return 0 ;
}
```

Q-2 A: Attempt any two: [10]

1) What do you mean by programming language? Explain various categories of programming languages in detail.

2) What is Array? Explain one dimensional Array in C in detail with example.

3) What is flowchart? Explain different shapes used to draw it. Also discuss its advantages and limitations.

Q-2 B: Differentiate between break and continue with suitable example. [4]

Q-3 A: Attempt any two: [10]

1) Explain following functions with example.
   a) strcpy   b) strncat   c) strcmp

2) What is loop? Explain pretest and post test loop with suitable example.

3) Explain Typecasting in C with appropriate example.

Q-3 B: What is an Operator? Explain any three categories of Operators in C in detail. [4]

Q-4 Attempt any three of the following: [12]

1) Write a C program to check whether a given number N is Armstrong number or not.

2) Write a C program to calculate sum of all digits in a given number.
   For e.g. if N = 345 then sum = 3 + 4 + 5 = 12.

3) Draw a flowchart and write a C program to find the maximum of three numbers. E.g. If input A = 5, B = 6, C = 9 o/p : C is maximum

4) Write a program to compare two string without using in built function.

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