



RAN-2311001101010001

B.Sc. (IT) (NEP) (Major Course) (Semester-I) February - 2026
Fundamentals of Programming Using C-I (Paper : Major - 104)

Time: 2 Hours]

[Total Marks: 50

સૂચના : / Instructions (1) ઉપરોક્ત દર્શાવેલ વિગતો ઉત્તરવહી પર અવશ્ય લખવી. Fill up strictly the above details on your answer book	Seat No.: <table border="1"> <tr> <td></td><td></td><td></td><td></td><td></td><td></td> </tr> </table> Student's Signature						

Q.1. Do as directed : (Any Ten)

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- (1) Constant declared using #define is called _____ constant.
- (2) What is the range of a variable declared as unsigned integer where integer size allocated is 2 byte?
- (3) _____ is a comparison operator and _____ is an assignment operator.
- (4) What is the output for the following code?

```
int main()
{
    int i=5,j ;
    j = i++ + ++i + --i;
    printf("%d %d", i, j);
    return 0;
}
```

- (5) What is the output for the following code?

```
int main()
{
    int k=15;
    printf("\n %d %d %d", k = 30, k>40, k==1 5);
    return 0;
}
```

- (6) What specifier is used in printf() to display hexadecimal integers?
- (7) What is the output for the following code?

```
#include <stdio.h>
int main()
{
    intx;
    x=1 0,20,30;
    printf("%d",x);
    return 0;
}
```

(8) _____ function in <string.h> is used to compare two strings for equality.

(9) What is the output for the following code?

```
#include <stdio.h>
int main()
{
    int a = 5, b = 2;
    printf("%d", a++ * ++b);
    return 0;
}
```

(10) List out control characters used in scanf() function?

(11) Which keyword is used to skip the current iteration in a loop?

(12) List out any five escape sequences used in C.

Q.2. Answer following questions (Any Two)

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- (1) What is a language translator? Give different types of Language translators. Write steps to compile and execute code with compiler at command prompt/terminal.
- (2) What is a string in C? How can we declare and initialize a String in C? Differentiate between following string functions:
 - a. strcmp & strncmp
 - b. strcpy & strncpy
- (3) What is a flowchart? Explain its importance in problem solving List the commonly used flowchart symbols along with their significance. Also, mention the merits and demerits of using flowcharts. Illustrate your answer with a suitable example.

Q.3. (A) Answer following questions (Any Two)

10

- (1) What is switch statement? Discuss how switch is better than else.. if ladder. Also list constraints when switch can not be used.
- (2) Differentiate between entry controlled and exit controlled loop with suitable example.
- (3) What is an array? Explain 1D array & 2D array with suitable example.

Q.3. (B) Answer following questions (Any One)

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- (1) Explain bitwise operators in C with example and its applications.
- (2) Explain enumeration and typedef with suitable example.

Q.4. Answer following question (Any Three)

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- (1) Write a C program to count number of digits in a given number.
- (2) Write a C program to find smallest element in an array of 10 integers.
- (3) Write a C program to calculate the sum of all elements of 3 X 3 matrix.
- (4) Write a C program to reverse string without using any inbuilt functions.