



Dezyne École College

Bachelor of Computer Application (B.C.A.) First Year-1st

Semester C Programming

Part-A: Short Answer Questions

(Answer in up to 20 words. Each carries 1 mark)

- What is a keyword in C?
- Define a constant in C.
- What are C tokens?
- Explain the use of the main() function.
- What is the role of a compiler?
- What is a variable?
- Define syntax error.
- What is a logical operator?
- Define unary operator with example.
- What is an infinite loop?
- What is the use of break statement?
- What is the use of continue?
- What is the use of goto statement?
- Define recursion.
- Define function prototype.
- What is a header file?

- What is the role of #define?
- What is a local variable?
- What is the scope of a static variable?
- What is an array?
- Define a 2D array.
- What is a string in C?
- What is null character in a string?
- Define structure.
- What is the difference between struct and union?
- What is typedef?
- What is an enumerator?
- What is a pointer variable?
- What is pointer arithmetic?
- Define malloc() function.

Part-B: Medium Answer Questions

(Answer in about 100 words. Each carries 3 marks)

- Explain the difference between actual and formal arguments.
- Describe the use of nested loops with example.
- Differentiate between while and do-while loop with example.
- Explain the switch-case statement with a program.
- Explain any four string handling functions.
- Describe the concept of array of structures with example.
- Explain pointer to function with a small program.
- Write a program to calculate factorial using recursion.

- Describe the use of `calloc()` and `free()` with syntax.
- Explain storage class specifiers with examples.
- Explain how strings are passed to functions in C.
- Explain the use of `sizeof` operator with syntax and example.
- What is the difference between automatic and register variables?
- What are the differences between compile-time and run-time errors?
- Write a program to reverse a string without using built-in functions.

Part-C: Long Answer Questions / Programs

(Answer in about 400 words. Each carries 7 marks)

- Write a program to find the largest and smallest element in an array.
- Explain the difference between structure and union with suitable example.
- Write a program to sort an array in ascending order.
- Write a program to count vowels, consonants, digits, and spaces in a string.
- Explain the concept of dynamic memory allocation with all four functions.
- Write a program to add two matrices.
- Write a program to search an element in a 1D array.
- Explain recursion with example of factorial and Fibonacci.
- Write a program to check if a number is prime or not using function.
- Write a menu-driven program using switch-case to perform arithmetic operations.
- Describe the various categories of functions in C.
- Write a program using pointers to swap two variables.
- Write a program to accept and display records using array of structures.

- Explain in detail the role of preprocessor directives in a C program.
- Describe in detail the process of compiling and executing a C program.



B.C.A. (Part-I) Examination, 2022

B.C.A. - 104

PROGRAMMING IN C

Duration of Examination: 1½ Hours

परीक्षा की अवधि: 1½ घण्टा

Max. Marks: 25

पूर्णांक: 25

Instructions to the Candidates:

परीक्षार्थी के लिए निर्देश:-

Part-A (Compulsory)

Answer any five questions (upto 20 words each). Each question carries one marks. **(5x1=5 Marks)**

कोई पाँच प्रश्न कीजिये। प्रत्येक प्रश्न का उत्तर 20 शब्दों से अधिक नहीं होना चाहिये। प्रत्येक प्रश्न एक अंक का है।

Part-B (Compulsory)

Answer any two questions (upto 100 words each). Each question carries three marks. **(2x3=6 Marks)**

कोई दो प्रश्न कीजिये। प्रत्येक प्रश्न का उत्तर 100 शब्दों से अधिक नहीं होना चाहिये। प्रत्येक प्रश्न तीन अंक का है।

Part-C (Compulsory)

Candidate is required to attempt any two question. (upto 400 words). **(2x7=14 Marks)**

कोई दो प्रश्न का उत्तर दीजिये। प्रश्न का उत्तर 400 शब्दों से अधिक नहीं होना चाहिये।

Part-A

- Q-1. Explain the term 'fprintf()'.
- Q-2. What do you mean by procedural language?
- Q-3. What is meaning of 'It' in C program?
- Q-4. Difference between = and ==.
- Q-5. What is preprocessor?
- Q-6. What do you mean by type casting?
- Q-7. What is 'getc()' and 'putc()'?
- Q-8. What is pointer?
- Q-9. Give syntax and use of size of operator.
- Q-10. What is nested if statement?

Part-B

- Q-11. Explain dynamic memory allocation in brief.
- Q-12. Explain strcmp() with suitable example.
- Q-13. Differentiate call by value and call by reference.
- Q-14. Difference between entry control loop and exit control loop.
- Q-15. Define recursive function.



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Part-C

Q-16. Explain Enumerated data types with examples.

OR

Write a program to read a line of text and output the number of words and characters in it.

Q-17. Explain break and continue statement with suitable example.

OR

Write a program using a function to generate the fabonacci series.

Q-18. What is storage class? Mention different storage classes available in C.

OR

Write short note on the following:-

- (i) Global variable.
- (ii) Character set
- (iii) Union.

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BCA (Part-I) Examination, 2023
Paper - BCA - 104
Programming in C

Duration of Examination: 3 Hours
परीक्षा की अवधि: 3 घण्टा

Max. Marks: 50
पूर्णांक: 50

Instructions to the Candidates:

परीक्षार्थी के लिए निर्देश:-

Part-A (Compulsory)

Answer all ten questions (upto 20 words each). Each question carries equal marks. (Marks-15)

Part-B (Compulsory)

Answer all five questions (upto 50 words each). Each question carries equal marks. (Marks-15)

Part-C

Answer all three questions (upto 400 words each). Three question of 7, 7 & 6 marks. (Marks-20)

Part-A (Compulsory)

- 1- What is Program?
- 2- What is the use of header files in C?
- 3- Define Keywords?
- 4- What is pointer?
- 5- What is the use of Scan () function?
- 6- What is pre processor statement?
- 7- What is format specifier?
- 8- Write the use of getch () function.
- 9- Differentiate between entry control loop and exit control loop.
- 10- Can modulus operator be applied to float variables?

Part-B (Compulsory)

- 11- Write a program in C to find areas and perimeter of a circle.
- 12- Write the difference between "While" and "Do-While" loop?
- 13- Write a C program to store number from 1 to 10 in an array.
- 14- Write guidelines to use print () function in C.
- 15- Write difference between the term call by value and call by reference.



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Part-C

Unit-I

- 16- What are the basic data types and subtypes used by C compiler? Explain properly.
OR
Write a c-program to multiply 2-D. Array.

Unit-II

- 17- Explain different types of loops in C with syntax and example.
OR
Explain break and continue statement with suitable example.

Unit-III

- 18- What is an array? Explain the declaration and initialization of one and two dimensional array with example.
OR
Write short note on,
(a) Structure and Union.
(b) Enumeration data types

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**Bachelor of Computer Applications (BCA)
(Part-I) (Semester-I) Examination , 2024
(Held in 2025)
BCA-103
C Programming**

Duration of Examination: 3 Hours

परीक्षा की अवधि: 3 घण्टा

Max. Marks: 70

पूर्णांक: 70

Instructions to the Candidates:परीक्षार्थी के लिए निर्देश:-*Note:- The question paper is divided into 02 Parts: Part - A & Part-B.***Part-A**

Will consist of 10 compulsory questions. Answer to each question shall be limited up to 50 words. Each question will carry 02 marks. Total 20 Marks. (Marks-10×2=20)

Part-B

Will consist of 10 questions. Student will have to answer 05 questions, selecting At least one questions from each unit. The answer to each question shall be limited up to 400 words. Each question carries 10 marks. Total 50 Marks.

(Marks-5×10=50)

Part-A

1. Why c language is invented?
2. What are Symbolic Constants? How they declared?
3. Explain Unformatted I/O functions, where they are used for?
4. Why following code will produce the output I explain.

```
#include<stdlib.h>
#include <stdio.h>
enum (false, true);
int main()
```

```
{
    int i = 1;
    do
    {
        printf("%d\n", i);
        i++;
        if (i < 15)
            continue;
    }while (false);
    getchar();
    return 0;
}
```

5. What will the output of following code:
- ```
#include<stdio.h>
int main() {
```



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```

int n;
for(n = 7; n!=0; n--)
printf("n = %d", n--);
getchar();
return 0;
}

```

6. How can you pass an array to a function by value?
7. What will the output of following code:  

```

#include <stdio.h>
#define scanf "%s Geeks For Geeks "
main()
{
printf(scanf, scanf);
getchar();
return 0;
}

```
8. State the meaning of the root word struct.
9. Define dynamic memory allocation functions and list its types.
10. What is the default return type of a function? How can you return more than one value from a function?

#### Part-B

##### Unit-I

11. Write a C program to find and display all Armstrong numbers between two given intervals.
12. Write a C Programme to print following pattern using for loop.

```

 * * *
 * * *
 *
 * * *
 * * *

```

13. Write a function to find the factorial of the given number.

##### Unit-II

14. Write a function rotate(arr[ ], d, n) that rotates arr[ ] of size n by d elements.

```

1 2 3 4 5 6 7

```

For example Rotation of the above array by 2 will make array

```

3 4 5 6 7 1 2

```

15. How is a 2-D matrix represented in memory? Write a program to add (3,3) matrix row wise and generate a (3,1) matrix?
16. Explain about C string:- (a) Definition (b) Declaration (c) Purpose (d) Limitation (e) Advantages

##### Unit III

17. What is the difference between call by value and call by reference? Explain with the help of an example.
18. Explain Following with separate example: (a) Array of Structure (b) Nested Structure
19. What is the use of pointers? Discuss concept of declaration and initialization of pointers.
20. Define Infix and Prefix notation of expression. Given a Prefix expression, convert it into an Infix expression. \*-A/BC-/AKL.