



ST. JOSEPH'S UNIVERSITY, BENGALURU -27
BCA (DATA ANALYTICS) – I SEMESTER
SEMESTER EXAMINATION: OCTOBER 2022
(Examination conducted in December 2022)

Registration Number:

Date & session:

BCADA 1121 – FUNDAMENTALS OF COMPUTING AND PROGRAMMING SKILLS
USING C

Time: 2 Hours

Max Marks: 50

This paper contains TWO printed pages and THREE parts

PART- A

Answer ALL Questions

5X1 =5

1. Define Algorithm. Write an algorithm to calculate even number between 0 and 99.
2. Explain looping statements in C.
3. Find the output of the following:
void main ()
{
int X=40;
printf ("%d\n",10 + X++);
printf ("%d\n",10 + ++X);
}
4. What do you mean by token? Write a C program to find the factorial of a given number.
5. Explain file open and close functions in C with specific syntax.

PART- B

Answer any FIVE of the following

5X3=15

6. Explain the formatted and unformatted input and output functions with sample C program.
7. Why switch statement is better than else If Ladder? Justify your answer with a suitable switch case.
8. Convert to the binary equivalent of $(24.1875)_{10}$.
9. What is a pointer? Explain how the pointer variable declared and initialized with a sample program.

10. Write a C program to find the area of triangle.
11. Distinguish between Structures and Union.
12. Write a program to find the currency denomination of given amount.

PART - C

Answer any THREE of the following

3X10=30

13. a). Define functions. Explain with the techniques of call by value and call by reference with a sample code. **(5)**
b). Write a program to swap the two values using functions. **(5)**
14. a). Is it possible to access an array element at a given position? Justify your answer with a sample program segment. **(5)**
b). Write a program to find the transpose of Matrix. **(5)**
15. a). What is the equivalent code of Hexadecimal to Binary $(1A5)_{16}$. Convert the binary to decimal and decimal to equivalent BCD. **(6)**
b). Write a program to find the particular element in an array using Linear Search. **(4)**
16. a). How do we declare a Character array? Implement string copy operation STRCOPY(str1, str2) that copies a string str1 to another string str2 without using library function.
b). Write a program to read a sentence and print the frequency of each of the vowels and total count of consonants. **(5+5)**