Roll No. 2309000022

BCA–C102

B. C. A. (First Semester)

EXAMINATION, 2023-24

PROGRAMMING IN 'C'

Time : $2\frac{1}{2}$ Hours

Maximum Marks : 60

Note : All questions have to be attempted.

Section—A

1. Multiple choice questions :

   (a) Which of the following is true about FILE *fp ?

   (CO5, BL-2)

   (i) FILE is a keyword in C for representing files and 'fp' is a variable of file type

   (ii) File is a stream

   (iii) File is a buffered stream

   (iv) FILE is a structure and 'fp' is a pointer to the structure of FILE type

(b) Choose syntax for C termary operator from the list :   (CO2, BL-5)

   (i) Condition ? expressing 1 : expression 2

   (ii) Condition : expressing 1 ? expression 2

   (iii) Condition ? expression ? < expression 2

   (iv) Condition < expression 1 ? expression 2

(c) In C a pointer variable to an integer can be created by the declaration :   (CO4, BL-2)

   (i) int p*;

   (ii) int *p;

   (iii) int +p;

   (iv) int $p;

(d) Identify, which function is used to compare two strings in C :   (CO3, BL-4)

   (i) strcmp

   (ii) strcat

   (iii) strlen

   (iv) strcomp

(e) Choose that, the continue statement cannot be used with ....   (CO2, BL-5)

   (i) for

   (ii) while

   (iii) do---while

   (iv) switch

(f)   Which of the following is true for variable names in C ?   (CO1, BL-2)

(i)   They can contain alphanumeric characters as well as special characters

(ii) It is not an error to declare a variable to be one of the keywords (life go to static)

(iii) Variable names cannot start with a digit

(iv) Variable can be of any length

(g)   Identify that, which function is used to find the length of a string in C ?   (CO2, BL-4)

(i)   lenstr

(ii) strsize

(iii) strlength

(iv) stringlen

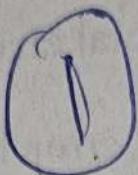(h)   Which of the following is not an operator in C language ?   (CO1, BL-2)

(i)   ,

(ii) sizeof()

(iii) ~

(iv) None of the mentioned

(i) Identify that, which of the following mode argument is used to truncate the file ?

(CO5, BL-4)

(i) a

(ii) w ①

(iii) f

(iv) t

(j) Size of union is size of the longest element in the UNION ? (CO4, BL-2)

(i) True

(ii) False

(k) Read the following program and evaluate the output for this :

```
#include <stdio.h>

int main()
{       static int a = 10;
        static int b = 15;
switch (a)
    {
        case 0 : printf("Zero"); break;
        case 10 : printf("Ten"); break;
```

case 15 : printf("HELLO"); break;

   }

     Printf{"Welcome to C programming");

    }

(i)   Ten HE_{110} Welcome to C programming

(ii) Ten Welcome to C programming·

(iii) Welcome to C programming

(iv) Compiler error

(l) Identify that, which of these is not a relational or logical operator ?   (CO1, BL-4)

(i) =

(ii) ||

(iii) = =

(iv) ! =

2. Attempt any *four* of the following :   3 each

(a) Explain the different types of storage classes with example.   (CO3, BL-4)

(b) What do you understand by tokens in C language ?   (CO1, BL-2)

(c) Design the algorithm and program to sort the array in C language.   (CO2, BL-6)

(d) Differentiate between structure and UNION with proper example.   (CO4, BL-5)

(e) Describe file. Also explain the operations implemented on file.   (CO5, BL-2)

Section–B

3. Attempt any *two* questions :   6 each

(a) Describe variable. Also explain the different types of data types used in C language.

(CO1, BL-4)

(b) What is the advantage of using function in C program ? What do you understand by the concept of 'function with arguments and without return value', function with arguments and with return value' ?   (CO3, BL-5)

(c) Create a C program to implement the Fibonacci series up to 9th turn in which Ist and 2nd terms should be 3, 5 respectively.   (CO2, BL-6)

4. Attempt any *two* questions :   6 each

(a) Define pointer. Explain the concept of pointers to structure with appropriate program.

(CO4, BL-4)

(b) Create a C program to explain the concept of bath break and continue statement.　(CO2, BL-6)

(c) Explain the dynamic memory allocation.

(CO5, BL4)

. Attempt any *two* questions :　　　　　6 each

(a) Design a flowchart to explain the concept of. switch case. Also write a program to input an alphabet and check whether it is vowel or consonant.　　　　　(CO2, BL-6)

(b) What are the advantages of pointer ? Also write a program to explain the concept of array of pointers in C.　　　　　(CO4, BL-6)

(c) What is function ? Explain the concept of call by value and call by reference in C with example.

(CO3, BL-4)