	SUMMER-2023		
	Exam Seat No.:		
	Academic Year:2022-2023	Semester:II	
	Name of Programme:B.Tech	Pattern:2022	
	Name of Course:Programming in C	Course Code:FYE221010	
	Max. Marks:60	Duration:2.50	

Instructions: Candidates should read carefully the instructions printed on the Question Paper
and on the cover page of the Answer Book, which is provided for their use.
1. This question paper contains 04 pages.
2. Answer to each new question is to be started on a new page.
3. Assume suitable data wherever required, but justify it.
4. Draw the neat labelled diagrams, wherever necessary.
5. The last columns indicates the Course Outcome and level of Blooms Taxonomy of
the Question/sub-question

Question No. 1 Attempt following Question

1) Explain the blocks used for drawing a flow chart (6) CO2

Question No. 2 Attempt following Question

2) What are the different relational and logical operators used in C programming? (6) CO2

Question No. 3 Attempt following Question

3a) What entry-controlled loop? Explain any iterative entry-controlled loop. (5) CO3

OR

3b) Write the syntax for the 'do-while' loop. Explain its properties. (5) CO3

3c) Find the error in the following code and rewrite the code. Also, (5) CO5
guess the output.

```c
#include <stdio.h>
int main()
{
int i, n=10;
for{i=0,i<=n,i++};
printf("%d\t",i)
}
```

OR

3d)
Find the error in the following code and rewrite the code. Also,
guess the output.

```c
#include <stdio.h>
int main()
{
int i, n=10;
i=0;
do;
{
   printf("%f\t",i);
   i=i+2;
}
while(i<=n)
}
```
(5) CO5

3e) Write a code to display the table of 5 using any loop. (6) CO3

OR

3f) What is an array in C? Write a program to enter 2x2 matrix using array? (6) CO3

Question No. 4 Attempt following Question

4a) Explain the following functions related to strings in C   (1)
strlen()   (2) strcpy()   (3) strcmp.() (4) strncmp() (5)
srtcat()
(5) CO6

OR

4b) What are the different types of functions? Explain all with example. (5) CO6

4c) Guess the output of following code (5) CO3

```c
#include <stdio.h>
#include <string.h>
int main()
{
    char abc[20]="KKWIEER";
    char xyz[20]="Nashik";
    strcat(abc,xyz);
    printf("%s\n",abc);
    printf("%d",strlen(abc));
}
```

OR

4d)
Guess the output of following code.

```c
#include <stdio.h>
#include <math.h>
float y(int a, int b, int c)
{
    float z;
    z=(-b+sqrt(b*b-4*a*c))/(2.0*a);
    return z;
}
void main()
{
    int a=1, b=5, c=6;
    float root1;
    root1=y(a,b,c);
    printf("root1=%f",root1);
}
```

(5) CO3

4e) Develop a program to find factorial number of a number entered from keyboard using functions. (6) CO6

OR

4f) A cone is having radius of 'r' cm and its height is 'h' cm, write a program to find its volume using functions. (6) CO6

Question No. 5 Attempt following Question

5a) What is structure in C? Compare structure and array. Write syntax of array. (5) CO3

OR

5b)
Explain following modes with file handling in C

(i) r   (ii) w   (iii) r+   (iv) w+   (v) a

(5) CO3

5c) Find the errors in following code and write code with corrections. (5) CO3

```c
#include<stdio.h>
#include <string.h>
struct student
{   int Roll_No;
    char name[50];
    float CET_score;
}sd;
void main( )
{
    sd.Roll_No=105;
    strcpy(name, "Akshay Kajale");
    sd.CET_score=99.60;
    printf("%f \t %c \t %0.2f", sd.Roll_No, sd.name, sd.CET_score);
}
```

OR

5d) Find the errors in following code and rewrite error free code.

```c
#include<stdio.h>
struct lib
{   int book_code;
    char Book_name[50];
    char Book_author[50];
    int price;
};
void main( )
{
    a1.book_code=10021;
    strcpy(a1.Book_name, "Let us C");
    strcpy(a1.Book_author, "Yashavant Kanetkar");
    a1.price=340;
    printf("%d \t %s \t %s \t %f",  a1.book_code, a1.Book_author, a1
        .Book_name,  a1.price);
}
```

(5) CO3

5e) Write a program to create a structure and read data of 10 students. Following are required fields in structure. (6) CO4

i) Roll No   ii) Name   iii) Age   iv) Marks Obtained

OR

5f) Write a program using following commands related to file handling. (6) CO4

(i) fopen() (ii) fprintf()