Roll no. ....

Degree: B.tech   Semester: 2nd   Course work

END-SEMESTER EXAMINATION, APRIL-MAY, 2024

Course Title: ... Computer Programming (Backlog)
Course Code: FCCS002

Duration: 03 Hours

Max. Marks: 40

Note: - Attempt all questions in the given order only. Missing data/information (if any), maybe suitably assumed & mentioned in the answer.

Q. No.	Question		Marks	CO
Q 1	**Attempt any 2 parts of the following**			
1a	i)	Distinguish between actual arguments and formal arguments with the help of examples.	4	1
	ii)	An array is declared as int a [100]; If the base address of the array is 5000, what will be the address of a[59].		
1b	i)	Define Data Types in C. Discuss basic data types regarding memory occupied, format specifier and range.	4	1
	ii)	Determine the value of the following logical expressions if a=5, b=10 i. a > b && a < b ii. a>b && a>b		
1c	Explain the local and external variables. Illustrate various types of storage classes in C-Language with suitable examples.		4	1
Q 2	**Attempt any 2 parts of the following**			
2a	i)	Explain the difference between for, while and do-while loops.	4	2

	ii)	Find the output of the following code:
		#include int main()
		{
		    int i=0;
		    do {
		    printf ("\n %d",i);
		    i++;
		    }
		    while(i<=5);
		    return 0;
		}		

2b	i)	Explain the following with proper example: a. break b. continue c. goto	4	2
	ii)	Find the output of the following code: int main()		

	``
	{
	    int color=2;
	    switch(color)
	    {
	        case 0: printf("Black");
	        case 1: printf("Blue");
	        case 2: printf("Green");
	        case 3: printf("Aqua");
	        default: printf("Other");
	    }
	    return 0;
	}
	``		

2c	i. Explain how the pointer variable declared and initialized.
	
	ii. Find the output of the following code:
	``
	int main()
	{
	int val=1;
	
	do{
	val++;
	++val;
	}
	while(val++>25);
	
	printf("%d\n",val);
	
	return 0;
	}
	``
		4	2

Q 3	**Attempt any 2 parts of the following**		
3a	What is Macro? Illustrate the working of Macro as a variable and as a function with the help of suitable example.	4	3

3b	Define the concept of pointer? Also find the output of the following code:
	``
	int main()
	{
	    int x,y;
	    int *ptr;
	    x=100;
	    ptr=&x;
	    y=*ptr;
	    printf("%d\n",y);
	    return 0;
	}
	``
		4	3

3c	Define Recursive function? Write a program to find the factorial of a number with recursive function.	4	3
Q 4	**Attempt any 2 parts of the following**		
4a	Explain in detail with suitable examples lists, sets, tuples, dictionary. Also explain the operations that can be performed	4	4

	on these.		
4b	Explain lambda functions in python using suitable examples. Also explain generator functions in details.	4	4
4c	What are file input and output operations in Python Programming. Elaborate with examples.	4	4
Q 5	**Attempt any 2 parts of the following**		
5a	How to create a list in python? Illustrate the use of negative indexing of list with example.	4	5
5b	Explain different file opening modes. Write a program to read content of any file and display the number of lines and words in that file.	4	5
5c	Write a Python program that reads a text file and changes the file by capitalizing each character of the file.	4	5