Model Question Paper

I/II Semester

C-PROGRAMMING FOR PROBLEM SOLVING (18CPS13/23)

Time: 3 hrs. Max. Marks: 100

Note: Answer any FIVE full questions, choosing one full question from each module.

MODULE 1

1	a	Explain different types of computer.	(6Marks)
	b	What is Software? Explain different types of software.	(6 Marks)
	c	With a neat diagram explain the basic structure of a computer	(8 Marks)
		OR	
2	a	Explain a general structure of C program with an example.	(8 Marks)
	b	What is a token? What are different types of tokens available in C language? Explain.	(8 Marks)
	c	Evaluate the following expressions: i) 22 + 3 < 6 && !5 || 22 = =7 && 22 – 2 > +5 ii) a + 2 > b || !c && a = = d *a – 2 < = e Where a=11, b=6, c=0, d = 7 and e=5.	(4 Marks)

MODULE 2

3.	a	Explain formatted input and output statement with examples.	(6 Marks)
	b	Explain if, if-else, nested if-else and cascaded if-else with examples and syntax.	(8 Marks)
	c	An electricity board charges the following rates for the use of electricity: for the first 200 units 80 paise per unit: for the next 100 units 90 paise per unit: beyond 300 units Rs 1 per unit. All users are charged a minimum of Rs. 100 as meter charge. If the total amount is more than Rs 400, then an additional surcharge of 15% of total amount is charged. Write a program to read the name of the user, number of units consumed and print out the charges.	(6 Marks)
		OR	
4	a	Explain the different types of loops in C with syntax.	(8 Marks)
	b	Show how break and continue statements are used in a C-program, with example.	(4 Marks)

	c	Develop a C program to generate and plot the Pascal triangle.	(8 Marks)

MODULE 3

5	a	What is an array? How a single dimension and two dimension arrays are declared and initialized?	(12 Marks)
	b	Write an algorithm and develop a C program that reads N integer numbers and arrange them in ascending order using selection Sort.	(08 Marks)

OR

6	a	Explain string manipulation library functions with their syntaxes. Write a program to check whether a string is palindrome or not.	(12 Marks)
	b	Write an algorithm and develop a C program to search an integer from N numbers in ascending order using binary searching technique	(8 Marks)

MODULE 4

7.	a	What is function? Explain different classification of user defined functions based on parameter passing and return type with examples	(12 Marks)
	b	Write a c-program using functions to generate the Fibonacci series.	(8 Marks)

OR

8	a	What is recursion? Explain. Write a c-program using recursive function for Binary to Decimal Conversion.	(10 Marks)
	b	Write a program in C using functions to swap two numbers using global variables concept and call by reference concept.	(6 Marks)
	c	Write a c-program using function to check whether the given number is prime or not.	(4 Marks)

MODULE 5

9	a	What is structure? Explain C syntax of structure declaration with example.	(6 Marks)
	b	Explain structure within a structure with an example.	(6 Marks)
	c	Write a c-program using structures to read, write, compute average - marks and display the students scoring above and below the average marks for a class of N students.	(8 Marks)

OR

10	a	What is a pointer? Explain how the pointer variable declared and initialized.	(4 Marks)
	b	Write a program in C to find the sum and mean of all elements in an array using pointers.	(6 Marks)

c Explain different categories of pre-processor directives used in C. (10 Marks)