Scheme - I

Sample Question Paper

Program Name	: **Computer Engineering Program Group**	
Program Code	: **CO/CM/IF/CW/IF**	
Semester	: **Second**	**22226**
Course Title	: **Programming in 'C'**	
Marks	: **70**	**Time: 3 Hrs.**

Instructions:

(1) All questions are compulsory.

(2) Illustrate your answers with neat sketches wherever necessary.

(3) Figures to the right indicate full marks.

(4) Assume suitable data if necessary.

(5) Preferably, write the answers in sequential order.

Q.1) Attempt any FIVE of the following.   **10 Marks**

1. Draw and label different symbols used in flow charts.
2. Give significance of math.h and string.h header files.
3. Differentiate between while and do-while loop.
4. Define enumerated data types with example.
5. List any four library functions with syntax.
6. Explain pointer declaration with example
7. Give the structure of 'C' program.

Q.2) Attempt any THREE of the following   **12 Marks**

1. Write an algorithm to evaluate following expression
   $ax^2+bx+c=0$
2. Illustrate with example the use of 'break' and 'continue' statements in C.
3. Write the structure declaration in C with suitable example.
4. Write the output of following code:

```
main( )
    {
      int radius ;
     float area, perimeter ;
      printf ( "\nEnter radius of a circle " ) ;
     scanf ( "%d", &radius ) ;
     areaperi ( radius, &area, &perimeter ) ;
     printf ( "Area = %f", area ) ;
     printf ( "\nPerimeter = %f", perimeter ) ;
      }
         areaperi ( int r, float *a, float *p )
         {
```

```
                        *a = 3.14 * r * r ;
                         *p = 2 * 3.14 * r ;
                    }
```

Q.3) Attempt any THREE of the following.   **12 Marks**
1. Explain typecast operators with example.
2. Describe the two ways of passing parameters to functions.
3. Classify all operators in C with its hierarchy.
4. Describe the two ways of passing parameters to functions.

Q.4) Attempt any THREE of the following.   **12 Marks**
1. Write algorithm and draw flowchart to print prime numbers between 1 to 100.
2. Suresh's basic salary is input through the keyboard. His dearness allowance is 40% of basic salary, and house rent allowance is 20% of basic salary. Write a program to calculate his gross salary.
3. If cost price and selling price of an item is input through the keyboard, write a program to determine whether the seller has made profit or loss. Also determine how much profit he made or loss he incurred.
4. Write a program for multiplication of two 3x3 matrices.
5. If the string "Alice in wonder land" is fed to the following scanf( ) statement, what will be the contents of the arrays str1, str2, str3 and str4?
   scanf ("%s%s%s%s%s", str1, str2, str3, str4) ;

Q.5) Attempt any TWO of the following.   **12 Marks**
1. Write a program to print the month of year using switch cases.
2. Write a program for multiplication of two 3x3 matrices.
3. Develop a Program to find sum of all elements stored in given array using pointers.

Q.6) Attempt any TWO of the following.   **12 Marks**
1. Write a program using structure to read and display information of students.
2. Write the program to swap values of two variables using call by reference.
3. Write a program to display the sum and average of numbers from 100 to 200 using pointers.

Scheme - I

Sample Test Paper - I

Program Name   **: Computer Engineering Program Group**

Program Code   **: CO/CM/IF/CW/IF**

Semester   **: Second**

Course Title   **: Programming in 'C'**

Marks   **: 20**

22226

Time: 1 Hour

Instructions:

(1) All questions are compulsory.

(2) Illustrate your answers with neat sketches wherever necessary.

(3) Figures to the right indicate full marks.

(4) Assume suitable data if necessary.

(5) Preferably, write the answers in sequential order.

Q.1 Attempt any Four of the following   **08 Marks**

    a. Define algorithm? Explain with examples.

    b. List different tokens available in C.

    c. Differentiate between while and do-while loop.

    d. Draw flow chart to determine whether a given number is even or odd

    e. Give importance of switch statement

    f. Give Bitwise operators with examples.

Q.2 Attempt any THREE of the following   **12 Marks**

    a. Develop an algorithm to find the greatest of three numbers.

    b. Two numbers are input through the keyboard into two locations C and D. Write a program to interchange the contents of C and D.

    c. Write a program to find sum of digits of a given number.

    d. Write a program to print sum of all odd numbers from 1 to 50.

Scheme - I

Sample Test Paper - II

Program Name	**: Computer Engineering Program Group**
Program Code	**: CO/CM/IF/CW/IF**
Semester	**: Second**
Course Title	**: Programming in 'C'**
Marks	**: 20**

22226

Time: 1 Hour

Instructions:

(1) All questions are compulsory.
(2) Illustrate your answers with neat sketches wherever necessary.
(3) Figures to the right indicate full marks.
(4) Assume suitable data if necessary.
(5) Preferably, write the answers in sequential order.

Q.1 Attempt any Four of the following   **08 Marks**

   a. State the use of array with example.
   b. List any four library functions with syntax.
   c. Give advantages of pointers
   d. Give the operations permissible on pointers.
   e. Differentiate between function declaration and function definition.
   f. What is the error in the following program

```
Type def struct product
{
 char name [10];
 float price ;
} PRODUCT products [10];
```

Q.2 Attempt any THREE of the following   **12 Marks**

   a. Write a program to sort following 10 numbers.
      32, 14,20,45,2,66,47,23,30,94
   b. Write a program to read an integer number .Print the reverse of this number using recursion.
   c. Write a program to print the lowercase characters into uppercase and vice versa in the given string "gOOd mORning".
   d. Write a program to implement linear search