Time: 2 hour   Max. Marks: 60

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NB: 1) Question No.1 is compulsory.

   2) Attempt any three questions from question no. 2 to 6.

Q1
(15 marks)

Solve any Three out of the following (5 marks each)

A   Explain what is flowchart ? Explain different symbols used in flowchart .

B   Explain following library functions with proper example.
1. pow( )   2.ceil( )   3. floor( ) 4. sqrt( )

C   Write a program to print following pattern after accepting number of rows from user.
1
2 3
4 5 6
7 8 9 10

D   Differentiate between Structure and Union.

E   Explain conditional Operator with proper example.

Q2
(15marks)

A   What is Recursion? Write a program to find GCD of two numbers using recursive function.   6M

B   Explain Different data type modifiers available in C language.   5M

C   Write a program to find length of a string without using standard library function.   4M

Q3
(15marks)

A   Write a program to display all prime numbers from 100 to 500.   6M

B   Write a program in C to find average of N elements entered by user using an array.   5M

C   Explain with example left and right shift bitwise operators.   4M

Q4
(15marks)

A   Write a program to store information of 10 students using Structure. Information include Roll, name, marks of a student   6M

B   Write a C program to check whether user entered string is palindrome or not. 5M

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C   Write the output for the following code.   4M
```
#include<stdio.h>
void main( )
{
    int i;
    for(i=0;i<5i++);
        printf("%d",i);
    printf("\nhi");
}
```

Q5
(15marks)

A   Write a program to find largest of three numbers.   6M

B   Differentiate between entry and exit controlled loop.   5M

C   Explain the need of Function Prototype with example.   4M

Q6
(15marks)

A   Write a program to check whether square matrix is symmetric or not.   6M

B   Write an algorithm and draw flowchart to check whether given number is prime
    number or not.   5M

C   Explain with syntax and example multi-way branching statement   4M

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