



ANURAG GROUP OF INSTITUTIONS

Autonomous

School of Engineering

I – B. Tech – I – Semester – I - Assignment Examination

Subject: Programming For Problem Solving-I

(Common to ALL)

Time: 50Mins

Max.Marks:05

Answer all the questions:

1. Explain the structure of ‘C’ program with an example.
2. Convert the following numbers to appropriate number systems.
 - a. $1001100111_{(2)}$ to Decimal, Octal and Hexadecimal.
 - b. $78_{(10)}$ to Binary, Octal and Hexadecimal.
 - c. $665_{(8)}$ to Binary, Decimal and Hexadecimal.
 - d. $12A9_{(16)}$ to Binary, Decimal and Octal.
4. Evaluate the Expressions
 - a. $x = 3+4*5-6/3*4/8+2*6-4*3*2$
 - b. $3+10*(16\% 7)+2/4$
 - c. if $a=5$, $b=0$, and $c=-2$, calculate $(a\&c)*b\%2$
 - d. If $x=12.8$, $y=3.5$ then $2*x/(3*y)$
 - e. If $a = 11$, what value will x be assigned for $x = a++ \% 3$.

5. Assess the output of the following program?

a. # include <stdio.h>

```
main( )
{
    int x = 10;
    int y = 20;
    x += y += 10;
    printf ("%d %d", x, y);
}
```

b. #include <stdio.h>

```
main( )
{
    int a = 1;
    int b = 1;
    int c = a || --b;
    int d = a-- && --b;
    printf("a = %d, b = %d, c = %d, d = %d", a, b, c, d);
}
```

```
c. #include <stdio.h>
main( )
{
    int i = 10;
    i = !i > 14;
    printf("i=%d", i);
}
```

```
d. #include <stdio.h>
main()
{
    int i = 3;
    printf("%d", (++i)++);
}
```

```
e. #include <stdio.h>
main()
{
    printf("%d", 1 << 2 + 3 << 4);
}
```

6. Outline precedence and associativity of operators in “C”.
 7. What is the importance of type conversion in “C”. Discuss with suitable examples
 8. Design a ‘C’ program for swapping of two numbers without using third or temporary variable.
 9. Design algorithm, flowchart and pseudocode for the following
 - a. To find the largest among three different numbers entered by user.
 - b. Area and perimeter of triangle, rectangle and square.
 - c. Check whether given number is odd or even.
 10. List out various bitwise operators with an example.

@@@@@@@Best of LUCK@@@@@@@