ES202-Introduction to Computers and Programming in C

Subject Name Time: 01Hr   Maximum marks: 30

SECTION-A (Attempt any two questions, Each of 05 Marks)

Q 1 Perform the following operation

(i) $111010111 + 101110111$

(ii) $111110 - 110011$

(iii) Subtract 1101001 from 101101001 using 2's complement

(iv) $(3456.625)_{10} = (?)_8$

(v) $(111110101000.01010110)_2 = (?)_{16}$

Q 2 List and explain five standard input-output devices.

Q 3 Differentiate:

    (a) Keywords and identifiers

    (b) While and do-while

Section-B ((Attempt any One question, Each of 10 Marks)

Q 1 (i) What is the output of the following

(a)
```c
#include <stdio.h>
int main()
{
  int x, y = 5, z = 5;
  x = y==z;
  printf("%d", x);
  return 0;
}
```
1 (Ans)

(b)
```c
#include <stdio.h>
int main()
{
  int a = 10, b = 20, c = 30;
  if (c > b > a)
  {
    printf("TRUE");
  }
  else
  {
    printf("FALSE");
  }
  return 0;
}
```
~~True~~ (Ans)

False

(c)

```c
#include <stdio.h>
int main()
{
    int i;
    for (i = 1; i <= 10; i++) {
        printf("Hello\n");
        continue;
        printf("world");
    }
    return (0);
}
```

Hello (10times)

(d)
```c
#include <stdio.h>
int main()
{
    int a = 055, b = 55;
    printf("%d%d", a, b);
    return (0);
}
```

4555 (Ans).

(e.)
```c
#include <stdio.h>
int main ()
{
    int x:
    x = 5 > 8? 10: 1! = 2 < 5 ? 20: 30;
    printf ("Value of x: %d", x);
    return 0;
}
```

X = 30

(ii) What are the features of C Programming Language?

Q 2 (i) Write a C program to check whether a triangle is Equilateral, Isosceles or Scalene.

(ii) Discuss the precedence and associativity of the logical operators (&&, ||, !) in C. How do they affect the evaluation of logical expressions?

Section-C(Compulsory, 10 Marks)

Q 1 (i) Write a C program to convert a binary number into a decimal number

(ii) Write a program to find the sum of following series:

$1! + 2! + 3! + 4! + \ldots + n!$