SEM 2 – 3 (RC 07-08)

F.E. (Semester – II) Examination, Nov./Dec. 2014
INFORMATION TECHNOLOGY
(Revised in 2007-2008)

Duration : 3 Hours   Total Marks : 100

Instructions : 1) Attempt **any five** questions, with at least **one** question from **each** Module.
2) **Make** suitable assumptions, **if required**.

MODULE – I

1. a) Describe the characteristics of monitor.   **7**

   b) What is Domain name and IP address ?   **5**

   c) Write short notes on :

      i) Magnetic tapes

      ii) Floppy disk.   **8**

2. a) Describe the working of e-mail with a diagram.   **10**

   b) Explain different functions of Operating System.   **4**

   c) Explain the peer to peer and client server architecture.   **6**

MODULE – II

3. a) Explain some of the service provided by DBMS.   **6**

   b) Explain different network topology with the help of a neat diagram.   **8**

   c) Describe steps involved in compilation with diagram.   **6**

4. a) Describe the characteristics of data in a database.   **8**

   b) What are the benefits of using Database Management System ?   **4**

   c) Write an algorithm and draw a flowchart to exchange values of two variables.   **8**

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MODULE – III

5. a) Differentiate between "for" and "while" loop with the help of an example.   6

   b) Write a 'C' program to compute the following series :   8

   $$1 - x + x^2/2 - x^3/6 + x^4/24 + \ldots\ldots + (-1)^n\, x^n/n!$$

   Where n and x is to be accepted by the user ?

   c) A C program has following declaration and initial assignment.   6

   int a = 60, b = 13, c = 19

   Determine the value of the following expression :

   i) a&b

   ii) a^b

   iii) a/b*c+(b+c)/c.

6. a) Give the output of the following c program :   6

   i)
   ```c
   #include <stdio.h>
   void main( )
   {
       int x = 5;
       signed a = 5;
       unsigned b = 5;
       if (x = 6)
               printf ("x equals 6\n");
       else
               printf ("x equals 5\n");
       if (a==b)
               printf ("EQUAL");
       else
               printf ("UNEQUAL");
   }
   ```

ii)
```c
#include <stdio.h>
void main( )
{
    printf("%d",printf("BestOfLuck"))
}
```

iii)
```c
#include <stdio.h>
void main( )
{
    int x = 10; y = 25;
    x = y++ + x++;
    y = ++y + ++x;
    printf ("%d%d\n",x,y);
}
```

b) Point out the error in the following program and write the correct program :   **4**

i)
```c
#include <stdio.h>
void main( )
{
    int x;
    printf ("enter the value of x\n");
    scanf ("%d", x);
    while (x>0)'
    x--;
}
```

ii)
```c
#include <stdio.h>
void main( )
{
    float y;
    for (y = .1; y! = 1.0; y + = .1);
    printf ("%f\n",y);
}
```

c) Write a C program to generate the following pattern using "for" loop.   **8**

```
A
BC
DEF
GHIJ
```

d) Compare the use of break and continue statement in C language.   **2**

MODULE – IV

7. a) Write a C program to enter the marks (in IT subject) of 'n' student in an array and then calculate the average marks of the class by passing the value to a function by calling the function by value.   **7**

    b) What are the advantages of using functions in C programming ?   **2**

    c) Write a C program to find multiplication of 2 matrix of order N*N.   **8**

    d) Explain the function of following string operator :   **3**

    i) strcat

    ii) strlen

    iii) strncpy.

8. a) Write a C program to accept a string, reverse it and check whether the string is palindrome, without using string handling function.   **8**

    b) Explain the following function with respect to files using examples :   **6**

    i) rewind

    ii) ftell

    iii) fscanf.

    c) Write a C program to read data from keyboard and write it to a file.   **6**

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