SEM - II (M) Repeat 6/12/13
ETC Dept

SEM 2 – 3 (RC 07-08)

F.E. (Semester – II) (Revised in 2007-08) Examination, Nov./Dec. 2013
INFORMATION TECHNOLOGY – II

Duration : 3 Hours | Total Marks : 100

Instructions : *i) Answer **5** questions with at least **one** question from **each** Module.*
*ii) **Assume** necessary data.*

MODULE – I

1. a) Briefly explain the following terms; with respect to computer : **6**
   i) Word length
   ii) Speed
   iii) Storage
   iv) Accuracy
   v) Versatility
   vi) Diligence.
   b) With the help of diagram, explain the various parts of a computers. **7**
   c) What is domain name and IP address ? Give examples. **7**
2. a) Explain virtual storage as a function of an operating system. **6**
   b) With the help of diagram, explain Ring topology. List its advantages and disadvantages. **8**
   c) Describe the working of e-mail, with diagram. **6**

MODULE – II

3. a) What is DBMS ? Explain any 1 database model. **4**
   b) State and explain the characteristics of data present in a database. **8**
   c) Describe the steps involved in compilation process with diagram. **8**
4. a) Differentiate between low level language and high level language. **4**
   b) Provide an algorithm and flow chart to exchange the values of 2 variables. **8**
   c) Write an algorithm and draw a flow chart to find sum of the series $1^2 + 2^2 + 3^2 + ... + n^2$. **8**

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MODULE – III

5. a) Explain the primary data types used in C. 6

b) Provide the syntax for 'for statement'. Write a C program to compute exponential series $e^{\wedge} x = 1 + x + \frac{x^2}{2!} + \frac{x^3}{3!} + \ldots + \frac{x^n}{n!}$. 8

c) Point out the errors in following C programmes : 6

i)
```
Void main ( )
{ int a = 300; b, c;
 if a > = 400
    b = 300
     c = 200
 Printf ("%d %d", a, b, c);
}
```

ii)
```
Void Main ( )
{ int i = 10, j = 20;
  if (i = = 25) && if (j = = 10)
        Printf (Hi);
}
```

6. a) Explain 'goto statement' with an example. 7

b) Write a C program to check if the number entered is palindrome using do_while loop. 7

c) State the purpose of following mathematical functions : 6

i) to upper (c)

ii) to lower (c)

iii) floor (x)

iv) abs (x)

v) pow (x, y)

vi) sqrt (x).

MODULE – IV

7. a) What is function in C ? Write a C program to generate Fibonacci series using function. 8

b) What is the difference between formal and actual arguments ? 6

c) Why arrays are used ? Trace the following C program and obtain the output. 6

```
# include <stdio.h>
void main ()
{
  int a [5] = {5, 1, 15, 20, 25};
  int i, j, m;
  i = ++ a [1];
  j = a [1] ++;
  m = a [i++];
  printf ("%d  %d  %d\n", i, j, m);
}
```

8. a) Write a C program to find trace of a matrix. 8

b) Explain the following string manipulation functions : 4

i) strcat

ii) strcmp

iii) strcpy

iv) strlen.

c) Write a C program to open a file called STUD-INFO and store following data in it : 8

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