



SEM 2 – 3 (RC 07-08)

F.E. (Semester – II) Examination, May/June 2013 INFORMATION TECHNOLOGY (RC 2007-08)

Duration : 3 Hours

Total Marks : 100

Instructions : i) Answer 5 questions with atleast **one** question from **each** Module.

ii) Assume **necessary** data.

MODULE – I

1. a) What are input devices ? Explain any 2 input devices. 6
- b) Explain the following : 6
 - i) RAM
 - ii) ROM
 - iii) Flash Memory.
- c) Briefly describe Network Architecture. What is the difference between peer to peer and client server architecture ? 8
2. a) What is an operating system ? Explain any 2 functions of operating system. 7
- b) Write a note on world wide web. 6
- c) What is spamming ? 4
- d) Explain the following LINUX commands : 3
 - i) touch
 - ii) cat
 - iii) who.

MODULE – II

3. a) Explain the generations of languages. 6
- b) Differentiate between low level and high level language. 6
- c) What is database ? Explain any 4 database models. 8



4. a) State and explain the characteristics of data present in a database. 8
- b) What is flowchart ? What are various notations used in flow chart ? 4
- c) Provide an algorithm and flow chart to find sum of digits of a number. 8

MODULE – III

5. a) What do you mean by identifier in C ? Specify the rules for identifier. Give example. 4
- b) Provide the syntax for switch statement. Illustrate with an example. 8
- c) Trace the following C programs and obtain the output : 8

```
i) void main ( )
    { int m;
      for (m = 1; m < 5; m++)
        printf ("%d \n", (m%2) ? m : m * 2);
    }
```

```
ii) void main( )
    { int m = 50, n = 0;
      while (n == 0)
        { if (n < 10)
          break;
          m = m - 10;
          printf ("%d \n", m);
        }
    }
```

6. a) Determine the hierarchy of operations and evaluate the following expression : 4
- $$x = 3/2 * 4 + 3/7 + 6$$
- b) What is the difference between break and continue statement ? Give example. 8
- c) Write a C program to compute exponential series : 8

$$e^x = 1 + x + \frac{x^2}{2!} + \frac{x^3}{3!} + \dots + \frac{x^n}{n!}$$



MODULE – IV

7. a) Describe the elements of C function, with an example. 8
- b) Explain the following concepts with respect to C functions : 8
- i) Call by value
 - ii) Call by reference.
- c) Explain the following string manipulation functions : 4
- i) Strcat
 - ii) Strcpy
 - iii) Strlen
 - iv) Strcmp
8. a) What is an array ? Write a C program to find transpose of a matrix. 8
- b) Trace the following C program and obtain the output 4
- ```
#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", i, j, m);
}
```
- c) A file named INPUT contains a series of integer numbers. Write a program to read these numbers and write all odd numbers to a file called ODD. 8