SEM 2 – 3 (RC 07 – 08)

F.E. (Semester – II) (Revised in 2007-08) Examination, Nov./Dec. 2017
INFORMATION TECHNOLOGY

Duration : 3 Hours | Total Marks : 100

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

MODULE – I

1. a) Show the steps involved in the working of the CPU and memory with the help of a neat diagram. 6
   b) Write short notes on the following input devices : 4
      i) Keyboard ii) Mouse
   c) What is an auxiliary storage ? Explain hard disk and floppy disks. 6
   d) Distinguish between DRAM and SRAM. 4

2. a) Write the salient features of DOS and Windows OS. 6
   b) What is the purpose of the following LINUX commands ? 4
      i) rmdir ii) touch iii) chmod iv) who
   c) List and explain the different functions of an operating system. 6
   d) Briefly explain the following terms 4
      i) Web browser ii) www

MODULE – II

3. a) List and explain with the help of a neat diagram the different steps involved in the compilation process. 8
   b) Differentiate between compiler and interpreter. 4
   c) Write an algorithm and draw a flowchart to find the summation of n natural numbers. 8

4. a) Describe the characteristics of data in a database. 8
   b) Write an algorithm and draw a flowchart to find the factorial of a number. 8
   c) Differentiate between high level and low level languages. 4

P.T.O.

MODULE – III

5. a) Explain the result of the following execution : 4

```
p = 10.269999;
q = 22.0/7.0;
r = p * q(p*q/10)
printf("%f, %f, %f", p, q, r);
```

b) Write a program to scan and print a name, which has maximum eight characters. 4

c) Explain 'continue' and 'break' statement with an example. 4

d) Write a program that calculates Fibonacii series in which every number is generated by the sum of two previous terms. The first two numbers are generating terms. 8

6. a) Determine the value of the following expression. Show each step of the computation clearly. Also convert the following expression to its equivalent C code : 6

$P = 2 * ((i/5) + (4 * (j - 3) \% (i + j - 2))$

[assume p → float i = 8 and j = 5]

b) Write a C code to calculate the sum of even numbers upto 100. 6

Eg : S = 2 + 4 + 6 +...+100

c) What is meant by operator precedence and associativity ? Give an example. 4

d) What are the different storage classes ? Explain each one of them. 4

MODULE – IV

7. a) Write a program to obtain the sum of the diagonal elements of a matrix. 6

b) Write a program to accept n numbers from the user. Also write functions to print the minimum and maximum value from the inputted array. 8

c) Explain the general format of opening a file with an example. 6

8. a) Write a program to rename the file from "file1.txt" to "file2.txt". 8

b) Explain with the help of an example the difference between call by value and call by reference. 5

c) Write a program to accept a two-digit number and write a function to separate the digits. 7