F.E. (Semester – II) (RC 2007-08) Examination, Nov./Dec. 2018
INFORMATION TECHNOLOGY

Duration : 3 Hours | Max. Marks : 100

Instruction : *Answer **any five** questions by selecting at least **one** question from **each** module.*

MODULE – I

1. a) Explain the mechanism of a floppy disk and provide a suitable diagram to support the answer. **5**

   b) Explain the working of a CPU and memory with the help of diagram. **6**

   c) Explain the characteristics of a monitor. **6**

   d) Distinguish between DRAM and SRAM. **3**

2. a) Give the use of the following DOS commands. **2**
      i) Dir
      ii) MKdir.

   b) What is operating system ? List the functions of operating system. **4**

   c) Write a note on the following network architecture **8**
      i) Peer to peer architecture.
      ii) Client/server architecture.

   d) Write a short note on the following : **6**
      i) Spamming
      ii) Web browser
      iii) URL.

MODULE – II

3. a) What is DBMS ? What are the series provided by DBMS. **8**

   b) Write an algorithm and draw a flowchart to reverse a number. **8**

   c) Distinguish between a compiler and an interpreter. **4**

P.T.O.

4. a) Describe the different types of high level languages. 6

   b) State and explain the characteristics of data present in a database. 8

   c) Write an algorithm and draw a flow chart to find the summation of n natural numbers. 6

MODULE – III

5. a) List and explain the basic datatypes used in C. 5

   b) Distinguish between ++i and i++. 5

   c) Give the output of the following programs : 5

   i)
```
main ()
{
   int x = 3, y = 4, z = 1 ;
    x + = y ;
    y – = x ;
    z* = x ;
   print f( " % d % d % d ", x, y, z) ;
}
```

   ii)
```
main ()
{
   int x, y ;
    x = 128 ;
    y = 32 ;
    x = x > > 1 ;
    y = y < < 2 ;
    print f ("x = % d and y = % d, x, y) ;
}
```

   d) Write a C program to generate the prime number series (1, 2, 3, 5 .... n terms). 5

6. a) Write a C program to generate the following pattern : 5

```
A  B  C  D  D  C  B  A
A  B  C        C  B  A
A  B              B  A
A                    A
```

b) Point out the error in the following program and correct it 5

```
void main ()
{
  int a, i ;
  scan f (" % d ", a) ;
  i = = a > 5 ? 2 ? 3 ;
  print (" i = % d/n ", i) ;
}
```

c) Write a menu driven program to implement a calculator. 5

d) With the help of an example, explain what is the use of goto statement. 5

MODULE – IV

7. a) Distinguish between local and global variables with the help of an example. 4

b) What is recursion ? Write a recursive function to find the factorial of a number. 6

c) Write a C program to search for the desired element in an array of integers. 6

d) What is an array ? Give the different ways of initialization of 1-D array. 4

8. a) Write a program to read data from keyboard until '\n' is encountered. Write this data to a file called "input.txt". Again read the same file and display the contents of the file on the screen. 8

b) Explain the different modes of a file. 2

c) Explain the following string handling function :

i) strcmp ()

ii) strcat (). 2

d) Write a C program to copy the content of string S_1 to string S_2 without using the string handling functions. 8