F.E. (Semester – II) (RC 2007 – 08) Examination, May/June 2018
INFORMATION TECHNOLOGY

Duration : 3 Hours | Total Marks : 100

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

MODULE – I

1. a) Explain the following : 5

   1) Central processing unit.

   2) Control unit.

   3) Arithmetic and logic unit.

   4) Memory

   5) Registers.

   b) Write a short note on CD-ROM. 4

   c) Define any five characteristics of monitors. 5

   d) Explain multi-user, multi-processing and real-time operating systems. 6

2. a) State various advantages and disadvantages of Disk Operating System (DOS). 3

   b) Define topology. Explain briefly any one of the topology. 5

   c) Explain URL with an example. 5

   d) Explain electronic mail. 5

   e) Explain WWW. 2

MODULE – II

3. a) What is DBMS ? Explain any two database models. 7

   b) Explain the following characteristics of the data present in the data. 7

      1) Shared
      2) Persistence
      3) Security
      4) Consistency
      5) Non-redundancy
      6) Validity/Integrity.

   c) What is an assembler, compiler and a interpreter ? 6

4. a) Define and explain algorithm and flowchart. 6

   b) Write an algorithm and draw a flowchart to find sum of even and odd n between 1 to N. 7

   c) Write an algorithm and draw a flowchart to generate required number. 7

MODULE – III

5. a) Explain with a flowchart the process of compiling and running a C program. 5

   b) What are different syntax rules for Identifiers ? 5

   c) What is exam ? Explain with an example. 5

   d) Evaluate the following expressions :
   $x_1 = (-b + \text{sqrt}(b*b - 4 * a * c))/(2 * a)$ assuming a = 1, b = – 5 and c = 6. 5

6. a) Explain how input of integer numbers is performed in a C program. 4

   b) What is the output of the following codes ? (3×2=6)

   i)
```
# include < stdio.h >
# include < conio.h >
void main( )
{
  int i;
  clrscr( );
  i = printf("computer");
  printf("%d", i);
}
```

ii)
```
# include < stdio.h >
# include < conio.h >
void main( )
{
  int varl = 15, varz = 10, p, q;
  clrscr( );
  p = varl > 14;
  q = varl > 8 && varz == 8;
  printf("p = %d", P);
  printf("q=%d", q);
}
```

iii)
```
# include < stdio.h >
# include <conio.h>
void main ( )
{
  int flt = 15, g = 10;
  printf ("%d\n",flt<<z);
  printf ("%d\n", flt%g);
}
```


c) Write a C program using switch-case construct to do the following : 6
When user enters 0 – calculate area of circle
When user enters 1 – calculate area of a square

d) Write a C program using do while loop to accept a character from the user and print the corresponding ASCII value. 4

MODULE – IV

7. a) Explain the general syntax of the function definition. 5

b) Illustrate with an example nesting of functions. 5

c) What are the rules to be followed while passing 2D arrays to functions ? 5

d) Define scope, visibility and lifetime of variables. 5

8. a) Explain how initialization of 1D array is performed at the two stages. 7

b) Write a C program using functions to generate fibonacci sequence of n terms. 7

c) Illustrate reading from and writing to a file. 6