SEM 2 – 3 (RC 07-08)

F.E. (Semester – II) (Revised Course 2007-08)
Examination, Nov./Dec. 2012
INFORMATION TECHNOLOGY

Duration : 3 Hours   Total Marks : 100

Instructions: i) Attempt **any 5** questions, with at least **one** question from **each** Module.

ii) Make suitable àssumptions, if **required.**

MODULE – I

1. a) Explain different characteristics of computer monitor.   **6**

   b) What is an operating system ? Describe its functions.   **6**

   c) What are optical disks ? Explain different types of optical disks.   **8**

2. a) Explain the working of Email, with diagram.   **6**

   b) What are the advantages and disadvantages of mesh network topology ?   **4**

   c) What is domain name ? How it is different from IP address ?   **6**

   d) What is the purpose of following LINUX commands ?   **4**
      i) touch   ii) cat
      iii) who   iv) chmod

MODULE – II

3. a) Briefly describe any 4 database models.   **8**

   b) Define algorithm and flowchart. Write an algorithm and draw flowchart to exchange values of 2 variables.   **8**

   c) What is compiler ? How it is different from interpreter ?   **4**

4. a) Describe different types of high level languages.   **8**

   b) Write an algorithm to generate Fibonacci series.   **5**

   c) Explain language interface and storage management with respect to DBMS.   **4**

   d) What is the function of an assembler ?   **3**

MODULE – III

5. a) List and explain basic data types used in C. 7

   b) A C program contains the following declarations and initial assignments :

   int i = 8, j = 5 ;

   float x = 0.005 ;

   Determine the value of each of the following expressions :

   i) 2 * ((i/5) + (4 * (j – 3)) % (i + j – 2)) .3

   ii) (i > 0) & & (j < 5) 1

   iii) ! (x > 0) 1

   iv) + + x 1

   c) Write a C program to find sum of digits of a number and to reverse the number. 7

6. a) Identify the errors in the following C programs : 4

   i) # include < stdio.h >

   Main ( )

   {

       float a ;

       int r ! = 4 ;

       a = 1.5 * * r * 2 ;

       printf (" % c", a) ;

   }

   ii) # include < stdio.h>

   main ( )

   {

       char u ; v ;

       int w ;

       u = a ;

       v = b ;

       w = a + b ;

       printf ("%d " , w) ;

   }
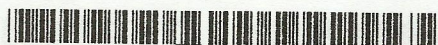
b) Write a C program using switch case statement to do the following :   8

When user enters 0 → find factorial of a number.

When user enters 1 → check whether number is even or odd.

c) Describe the syntax of following control loops :   8

   i) for loop   ii) do-while loop

MODULE – IV

7. a) Describe the elements of C functions. What are the advantages of using functions ?   7

b) What is 2-D array ? Write a C program to find transpose of a matrix.   7

c) Differentiate between actual and formal arguments with an example.   6

8. a) With the help of example, explain   8

   i) Call by value

   ii) Call by reference.

b) Write a C program to read numeric data from keyboard and write it to file.   8

c) Explain the following file input/output operations :   4

   i) fopen( )   ii) fclose( )

   iii) getc( )   iv) fseek( )

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