CERTIFICATE IN INFORMATION TECHNOLOGY (CIT)

03236

Term-End Examination

December, 2010

CIT-001 : FUNDAMENTALS OF COMPUTER SYSTEMS

Time : 2 hours

Maximum Marks : 50

(Weightage : 75%)

Note : *All the questions in Section - A are compulsory. Answer any three questions from the Section - B.*

SECTION - A

10x1=10

1. Answer the following objective type questions. Each objective type question **carries one** mark.

   (i) Which of the memory is used to reduce the cost of large sized memory between the CPU and main memory ?

   (a) ROM

   (b) PROM

   (c) Cache

   (d) Optical disk

   (ii) Resolution of a monitor means _____ .

   (a) refresh rate of a monitor.

   (b) numbers of colour bits per cm.

   (c) numbers of pixels per cm.

   (d) numbers of pixels per inch

(iii) What is the size (in bytes) of double data type in C language ?

(a) 16   (b) 10

(c) 4   (d) 8

(iv) Which of the following is **not** a comparison operator in C language ?

(a) < =   (b) ! =

(c) !   (d) = =

(v) Which of the following is correct option to define parallel transmission ?

(1) Fast Transfer Rate.

(2) LONG Distance transmission.

(3) Slow transfer Rate.

(4) Less Cost.

     (a) 1 & 2   (b) 2 & 3

     (c) 2, 3 & 4   (d) 1, 2, & 4

(vi) Typically Gateways work on which TCP/IP layer ?

(a) Internet layer.

(b) Application layer.

(c) Transport layer.

(d) Host to Network layer.

(vii) What is a solution to provide "integrity" of the information ?

(a) Encryption

(b) Access Control

(c) Backup

(d) Hash functions

(viii) Logical error in a program can be detected _____ .

(a) by the operating system.

(b) by the compiler.

(c) during execution of a program.

(d) All the above.

(ix) Which of the following secondary storage devices is most robust in nature ?

(a) Optical

(b) Magnetic Disk

(c) Magnetic tape

(d) Hard Disk.

(x) FDDI is an example of _____ topology.

(a) Bus   (b) Star

(c) Mesh   (d) Ring

2. Which type of data base model follows the tree structure ? Compare it with sequential file system.   5

3. Draw and explain the Flow chart for finding sum of series :   5

$1^2 + 2^2 + 3^2 + \ldots\ldots\ldots\ldots + n^2$

SECTION - B

4. (a) What are the two basic types of modems ? **5**
         Compare between them. Also, write how
         the speed of modem is measured ?

    (b) How does virus infect the computer **5**
         system ?

5. (a) Write a program in C, which adds the **7**
         values of two arrays and store in third
         array named sum.

    (b) Define confidentiality, Integrity and **3**
         Availability.

6. (a) Which network device is used to join or **5**
         connect local area networks. (LANs) ?
         Compare it with Gateways.

    (b) Define the Real time operating system. **5**
         Also, Differentiate between Hard and Soft
         real time system.

7. (a) Consider the following relations with **5**
         primary key under lined. Draw the ER
         Diagram for this Data base.

         Doctor   (<u>regno,</u> name, telephone,
                   address, city, designation)

Patient   (pname, P-code, street, city, phone)

Visit   (pname, P-code, date of visit, regno, fees)

(b)   Give full form of TCP/IP. Explain the   5
functions of each layer in TCP/IP model.