| CIT-001

CERTIFICATE IN INFORMATION TECHNOLOGY (CIT)

01701

Term-End Examination
December, 2011

CIT-001 : FUNDAMENTALS OF COMPUTER SYSTEMS

Time : 2 hours   *Maximum Marks : 50*
                                   (Weightage : 75%)

Note :   *Question No.1 is compulsory. Attempt* **any four** *from the remaining.*

1.   Answer the following objective type questions. Each objective type question carries one mark.
                                              10x1=10

   (a)   Errors in computer programs are generally called _____.

      (i)   Bugs   (ii)   Interrupts

      (iii) Interfaces (iv)   Problems

   (b)   The fastest memory placed between the processor and the main memory is :

      (i)   Cache   (ii)   ROM

      (iii) Hard disk (iv)   None of the above

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(c) Which of the following is not a transmission medium for data transfer ?

    (i)   Telephone lines

    (ii)   Coaxial cable

    (iii) Modem

    (iv) Air

(d) The first mechanical computer designed by Charles Babbage was called_____.

    (i)   Abacus

    (ii)   Calculator

    (iii) Analytical Engine

    (iv) Processor

(e) A communication device that combines transmission from several I/O devices into one line is a _____.

    (i)   Concentrator

    (ii)   Modifier

    (iii) Multiplexer

    (iv) Full-Duplex line

(f) Which data communication method is used for sending data in both directions at the same time ?

    (i)   Simplex   (ii)   Half Duplex

    (iii) Full Duplex   (iv) Duplex

(g) _____ is a program that places programs into main memory and prepares them for execution.

(i) Assembler   (ii) Loader

(iii) Compiler   (iv) Translator

(h) DES stands for :

(i) Data Encryption Standard

(ii) Disk Encryption Solution

(iii) Data Encoding Scheme

(iv) None of the above

(i) The computer security process that verifies that a person or object is who he/she/it claims to be is :

(i) Authorisation

(ii) Integrity

(iii) Confidentiality

(iv) Authentication

(j) What is the name of network topology in which there are bi-directional links between each possible node ?

(i) Tree   (ii) Ring

(iii) Mesh   (iv) BUS

2. What is a register ? Explain the need of registers in the instruction execution.   **10**

3. What is multi-tasking ? Explain using an example of multitasking operating system. 10

4. (a) Explain, how the CPU and memory work together for data processing ? 5

   (b) Draw and explain the basic structure of a Von Neumann machine. 5

5. (a) Draw and explain the flow chart for finding the prime numbers in the given list of numbers. 5

   (b) Define an operating system. Differentiate between the serial processing and batch processing. 5

6. (a) What is a virtual memory ? Explain its advantages. 4

   (b) Differentiate between LAN, MAN and WAN. 6

7. (a) What are firewalls ? Explain their purpose for any network. 5

   (b) Write a program in C language to add the two matrices of size 3×3. 5