

**CERTIFICATE IN INFORMATION
TECHNOLOGY (CIT)**

Term-End Examination

December, 2013

**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 :

1x10=10

- (a) Which of the following is the fastest transmission medium ?
- (i) Co-axial Cable
 - (ii) Optical Fiber
 - (iii) Twisted pair
 - (iv) Air
- (b) Find the 'odd man out' of the following :
- (i) Assembler
 - (ii) Compiler
 - (iii) Interpreter
 - (iv) Loader
- (c) DES algorithm is used in _____.
- (i) ATM machines
 - (ii) Cellular Phones
 - (iii) PSTN
 - (iv) Washing Machine

- (d) Which of the following OSI layer is responsible for transparent and reliable transfer of data ?
- (i) Physical layer
 - (ii) Session layer
 - (iii) Transport layer
 - (iv) Network layer
- (e) _____ is a form of data transfer in which communication channels are used for several transmission.
- (i) Multiplexing
 - (ii) Synchronous mode
 - (iii) Asynchronous mode
 - (iv) Token Passing
- (f) Which of the following is not an output device ?
- (i) CRT
 - (ii) LCD
 - (iii) Projection Display
 - (iv) Scanner
- (g) One kilo byte is equal to :
- (i) 1000 bytes (ii) 1024 bits
 - (iii) 1024 bytes (iv) 1000 bits
- (h) Which of the following memory has fastest access ?
- (i) Secondary
 - (ii) Main
 - (iii) Cache
 - (iv) CPU Register
- (i) The computer security process that verifies that data/file is not modified during the communication is known as :
- (i) Authorisation
 - (ii) Integrity
 - (iii) Confidentiality
 - (iv) Authentication

- (j) SQL stands for :
- (i) Sequential Query Language
 - (ii) Standard Query Language
 - (iii) Simple Query Language
 - (iv) Structured Query Language
2. Draw a block diagram of a basic computer organisation and explain the functionality of each unit. 10
3. Write a program in C language to read a string form user and print the reverse of string using array. Also, draw the flowchart of this program. 10
4. (a) Differentiate between private key and public key cryptography systems. 5
- (b) Explain half duplex and full duplex transmission, with an example for each. 5
5. (a) Write the basic functions performed by an operating system. 5
- (b) What are the advantages and disadvantages of file based systems ? 5
6. (a) Explain the kinds of attacks occur due to 'trojan horses'. 5
- (b) What is meant by 'Volatile Memory' ? Differentiate between dynamic RAM and static RAM. 5
7. Write a short note on the following : $2\frac{1}{2} \times 4 = 10$
- (a) Multi-tasking
 - (b) Virtual Memory
 - (c) Local Area Network
 - (d) Firewall