

**CERTIFICATE IN INFORMATION  
TECHNOLOGY (CIT)**

**Term-End Examination**

**June, 2014**

**CIT-001 : FUNDAMENTALS OF COMPUTER  
SYSTEMS**

*Time : 2 hours*

*Maximum Marks : 50*

*(Weightage : 75%)*

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

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

**10x1=10**

- (a) Which of the following operator is "boolean AND" operator ?  
(i) || (ii) &  
(iii) && (iv) &=
- (b) Tuple in a database is also known as :  
(i) Column (ii) Table  
(iii) Row (iv) Relation
- (c) Which of the following is not a type of DBMS ?  
(i) Relational (ii) Sequential  
(iii) Hierarchical (iv) Dynamic
- (d) "An attribute that may take on more than one value for a given entity instance" is known as :  
(i) Key attribute  
(ii) Derived attribute  
(iii) Multivalued attribute  
(iv) Functional attribute

- (e) Which of the following network topology is most reliable ?
- (i) Bus
  - (ii) Ring
  - (iii) Star
  - (iv) Mesh
- (f) Resolution of monitor screen is calculated by \_\_\_\_\_.
- (i) pixels
  - (ii) dots per inch
  - (iii) electrons per inch
  - (iv) all of the above
- (g) Scanner is a/an \_\_\_\_\_ device.
- (i) complex
  - (ii) output
  - (iii) input
  - (iv) (ii) and (iii) both
- (h) "DOS" means \_\_\_\_\_.
- (i) Direct Open System
  - (ii) Direct Operating System
  - (iii) Disk Open Software
  - (iv) Disk Operating System
- (i) What is the size of " Double" data type in C language ?
- (i) 2
  - (ii) 16
  - (iii) 8
  - (iv) 4
- (j) 'LDA' code in assembly language is used to represent :
- (i) Link dynamic register A
  - (ii) Load data
  - (iii) Load register A
  - (iv) Link register A

2. Write a program in C language, which finds the greater number, among any three numbers. Also, draw the flowchart of this program. 10

3. What is assembler ? Differentiate between compiler and interpreter. Give the example languages for each. 10

4. (a) Draw an ER-diagram for the following relations (with primary key underlined) : 6  
teacher (Emp\_ID, tname, department, address)  
student (Reg\_NO., Sname, father name, course\_code, programme, year)  
class (tname, programme, department, Room No, Emp\_ID, course\_code)
- (b) What is Real Time System ? Explain its types. 4
5. List and explain different types of information security threats. Also, briefly give possible solutions for each. 10
6. (a) Explain the process of packet filtering. 5  
(b) What is meant by 'Virtual Memory'? Explain its advantages. 5
7. (a) Compare and contrast between following network topologies : 6  
(i) BUS  
(ii) RING  
(iii) STAR  
(iv) MESH
- (b) Write the use of cache memory. 4
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