

Advanced Diploma in Information Technology (ADIT) /  
Bachelor in Information Technology (BIT)

Term-End Examination

December, 2007

CST-101 : FOUNDATION IN INFORMATION TECHNOLOGY

Time : 2 Hours

Maximum Marks : 50

**Note :** There are **two** Sections in this paper. Section A consists of objective type and short answer type questions. All the questions in Section A are **compulsory**. Section A carries 26 marks. Section B carries 24 marks. Attempt any **two** out of the three questions in Section B.

SECTION A

1. Attempt the following 10 objective type questions. There are four choices given for each question. Select the best choice. If none of the given choices are correct then mark '0' as your answer. Each objective type question carries one mark. 10×1=10
- (i) A group of 4 bits is called
- (a) Octave
  - (b) Nibble
  - (c) Byte
  - (d) Nyte
- (ii) The two parts of the CPU are
- (a) Control unit and Memory
  - (b) Addresses and Registers
  - (c) Addresses and ALU
  - (d) Control unit and ALU
- (iii) Which of the following was the first electronic computer ?
- (a) Pascal's machine
  - (b) Mark I
  - (c) IBM 1401
  - (d) UNIVAC

- (iv) Which of the following is **not** an advantage of RISC machines ?
- (a) Speed
  - (b) Complex hardware
  - (c) Simple hardware
  - (d) Shorter design cycle
- (v) Which of the following is an example of the real time systems ?
- (a) On-line railway reservation system
  - (b) Payroll processing system
  - (c) Aircraft control system
  - (d) School management system
- (vi) The person(s) involved in System Investigation includes :
- (a) Programmers
  - (b) System Analysts
  - (c) System Managers
  - (d) All of the above
- (vii) Which of the following loses its contents when the computer is turned off ?
- (a) PROM
  - (b) ROM
  - (c) RAM
  - (d) CD-ROM
- (viii) Each process has segment of code, called a \_\_\_\_\_ section, which accesses shared memory or files.
- (a) Mutual
  - (b) Common
  - (c) Critical
  - (d) Shared
- (ix) Which of the following is the slowest in accessing data ?
- (a) Floppy disk
  - (b) CD-ROM
  - (c) Hard disk
  - (d) Magnetic tape
- (x) In UNIX C1 || C2 means
- (a) C2 is executed if C1 fails
  - (b) C2 is executed if C1 is successful
  - (c) C1 and C2 both are executed
  - (d) None of the above

2. Compare and give at least three differences between the following :

4×3=12

- (a) RAM and ROM
- (b) Multiprogramming and Multitasking
- (c) 3GL and 4GL
- (d) Mini-computer and Main-frame

3. What are the steps involved in System Design ? How are these steps useful in system development ?

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## SECTION B

Attempt any **two** questions from this section.

4. (a) What are the differences between CISC and RISC machines ? Write two advantages and two disadvantages of CISC machines. 7
- (b) What is multithreading ? How is it different from multitasking ? Give two examples of multitasking operating systems. 5
5. (a) What is file processing ? Write any three differences between sequential and direct-access file processing. Give two disadvantages of file processing system. 7
- (b) What is a Process Control Block (PCB) ? Explain the use of Process Control Block and mention the information contained in the PCB. 5
6. (a) Explain the prototyping model and its relative advantages and disadvantages. 6
- (b) Explain the use of the following UNIX commands with the help of an example for each : 6
- (i) msg
  - (ii) talk
  - (iii) kill