

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

**Term-End Examination**

**June, 2007**

**CST-101 : FOUNDATION IN INFORMATION TECHNOLOGY**

*Time : 2 Hours*

*Maximum Marks : 50*

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**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.*

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**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) Registers are part of \_\_\_\_\_ in a computer.
- (a) Addresses and ALU
  - (b) Control unit and memory
  - (c) Control unit and ALU
  - (d) Addresses and Control unit
- (ii) \_\_\_\_\_ processors were designed to execute each instruction completely before beginning the next instruction.
- (a) RISC
  - (b) CISC
  - (c) CAD
  - (d) OLAP
- (iii) Inode in UNIX is
- (a) a pointer to a disk block
  - (b) a pointer to a file
  - (c) a memory protection semaphore
  - (d) the name of a reserved keyword

- (iv) Which of the following is/are sequential access device(s) ?
- (a) Hard disk
  - (b) Floppy disk
  - (c) Magnetic tape
  - (d) All of the above
- (v) The refresh rate of a monitor is measured in
- (a) Pixels
  - (b) Bits
  - (c) Hertz
  - (d) KB
- (vi) Transfer of information to and from the main memory takes place in terms of \_\_\_\_\_
- (a) Bits
  - (b) Bytes
  - (c) Words
  - (d) Nibbles
- (vii) Which of the following system software always resides in main memory ?
- (a) Loader
  - (b) Linker
  - (c) Assembler
  - (d) Text Editor
- (viii) The objective of a multiprogramming operating system is to
- (a) minimize the next execution time
  - (b) maximize processor utilization
  - (c) minimize the user response time
  - (d) maximize the user response time
- (ix) The "Chown" command in UNIX changes the
- (a) home directory of a user
  - (b) access permissions of a file or directory
  - (c) priority of a process
  - (d) None of the above
- (x) A big file can be broken into smaller files using which of the following UNIX commands ?
- (a) Break
  - (b) Split
  - (c) Divide
  - (d) Bifurcate

2. Compare and give at least three differences between the following : 4×3=12
- (a) Random access device and Sequential access device
  - (b) Assembly language and High level language
  - (c) Batch processing and On-line processing
  - (d) Multithreading and Multiprocessing
3. What are the steps involved in system analysis ? How are these steps useful in system development ? 4

## SECTION B

*Attempt any two questions from this section.*

4. (a) What is RISC processor ? What are the characteristics of RISC machines ? Write two advantages and two disadvantages of RISC machines. 8
- (b) What are 3 GLs and 4 GLs ? Write any two differences between third and fourth generation languages. 4
5. (a) What is fragmentation ? How does it occur ? Explain different memory management schemes with respect to fragmentation. 7
- (b) What are CASE tools ? Give architecture of a CASE environment. How does CASE assist in the software development life cycle ? 5
6. (a) What is the Kernel approach of an operating system ? How is this approach different to that of a client/server approach ? Explain the advantages of Kernel based operating system. 6
- (b) Explain the use of the following UNIX commands with the help of an example for each : 6
- (i) nice
  - (ii) cal
  - (iii) cmp