END-TERM EXAMINATION

DECEMBER 2006

Exam Series code: 100179DEC06200134	
Paper Code : MCA-101	**Paper Title: Introduction to Information Technology**

Time: 3 Hours **Maximum Marks: 60**

Note: Question No. 1 is compulsory which carry 20 marks and attempt one question from each section B to E. All question from 2 to 9 carry 10 marks each.

SECTION-A

Q. 1. (a) What is data processing? What are its basic activities?

(b) What is meant by "generation" in computer terminology? How many computer generations are there till now?

(c) What is an interpreter? How does it differ from a compiler?

(d) When a computer language called machine dependent? What is the main disadvantage of such a language?

(e) What is 'Virtual Machine'? Explain how an operating system helps in converting a compute system into a virtual machine.

(f) What is data integrity problem? Explain how the database oriented approach of data organization helps in solving this problem.

(g) What is a data dictionary? How is it created / updated?

(h) Identify the basic elements of a communication system and the purpose of each.

(i) What is a multimedia computer system? What are its typical characteristics? Do all multimedia systems need to have all these characteristics?

(j) What is the Internet? How did it evolve? Explain the difference between "Downloading" and "Uploading" of information.

SECTION-B

Q. 2. (a) Define peripherals with example. Differentiate between the characteristics of primary storage and secondary storage of computer system.

Q. 3. (a) What is an algorithm? What are the characteristics necessary for a sequence of instructions to qualify as an algorithm? How do we normally judge the quality of an algorithm?

SECTION-C

Q. 4. Define kernel in UNIX operating system. Explain the use of pipe in Linux environment using examples.

Q. 5. What is database management system? Give examples of how a company and an individual might use a DBMS.

SECTION-D

Q. 6. Differentiate between narrowband, voice band and broadband communication channels. Give a practical application of each.

Q. 7. What is a optical fiber? How is it used for data communications? What are its disadvantages?

SECTION-E

Q. 8. Explain the difference between "generative graphics" and "cognitive graphics". Give two use of each.

Q. 9. Explain how it is ensured that only authorized users can access resources of a remote computer in case of FTP and Telnet services.

END-TERM EXAMINATION

FIRST SEMESTER [MCA] - DECEMBER 2005

Paper Code: MCA-101	**Subject: Introduction to Information Technology**

Time: 3 Hours	**(Batch – 2004 & 2005)**	**Maximum Marks: 60**

Note: Attempt one question from each section. Q. 9 is compulsory.

Section –A

Q. 1. (a) What is a flow chart? Draw flow chart to find the largest and smallest of three numbers.

(b) How integers are represented in memory. Explain with example.

Q. 2. What are the various components of a computer? Discuss with the help of a block diagram.

Section – B

Q. 3. Explain the following commands of DOS.
(i) COPY
(ii) RENAME
(iii)CD
(iv) MD

Q. 4. What are the various types of operating system? Discuss characteristics of each of them.

Section – C

Q. 5. What are the different types of media used for the data communication? Explain the characteristics of each of them.

Q. 6. What is the architecture of a DBMS? What is the role of a DBA?

Section – D

Q. 7. What are the major components of a Multimedia based system. What are various multimedia compression standards?

Q. 8. What is Internet? What are various applications of Internet?

Section – E

Q. 9. (a) What is a schema and subschema?
(b) What is the need for software on a computer? Explain.
(c) What is a compiler?
(d) What is the need for operating system?
(e) What are the major steps in problem solving and refinement?
(f) What are the various types of software used in computers?
(g) What are the various options with DIR commands?
(h) What is a web browser? Explain.
(i) How does LAN differs from a WAN?
(j) What is the star topology?

END-TERM EXAMINATION

FIRST SEMESTER [MCA] - DECEMBER 2004

Paper Code: MCA-101	Subject: Introduction to Information Technology

Time: 3 Hours	(Batch – 2004 & 2005)	Maximum Marks: 60

Note: Q.1 is compulsory. Attempt any two questions from each section.

Q. 1. (a) Name any one sequential access data storage device and its principle of working. **3**
(b) What is the difference between the dynamic random access memory (DRAM) and the static random access memory (SRAM). **2**
(c) Distinguish between a compiler and an Interpreter. **3**
(d) Describe the following DOS commands: - **5**
    (i) DIR
    (ii) RMDIR
    (iii) CD
    (iv) DISKCOPY
    (v) DISKCOMP
(e) Distinguish between Coaxial, STP and UTP cable(s). **3**
(f) Compare and contrast Multimedia and Hypermedia. **2**
(g) What is the transmission speed on CAT1, CAT2, CAT3 and CAT5 cables? **2**

Section -A

Q. 2. (a) Describe the evolution of the computers on the basis of hardware type and processing capacity. **5**

(b) Describe the Institute of Advanced Studies Architecture (Also known as the Von Newman Architecture) of a computer using a block diagram. **5**

Q. 3. (a) Discuss the working principle of an Impact Printer. **5**

(b) Distinguish between:- **5**
    (i) A multi-tasking and a multi-user system.
    (ii) The network model and the relational model for database system.

Q. 4. (a) Design a flow chart for the merging of two sorted list of names such that the combined list after merging is also sorted. **5**

(b) "All software can be described as a collection of utility programs, therefore any software development if essentially program design. Thus, any person who

can code a utility program of upto 100 lines of code is a good software programmer". Comment. **5**

Section - B

Q. 5. (a) Distinguish between LAN, WAN and MAN on the basis of architecture and geographical area coverage. **5**

(b) Discuss the kernel based model of an operating system using the example of any modern OS. **5**

Q. 6. (a) Describe the design principle of A/D and D/A converters and the usage in communication systems. **5**

(b) Enumerate and describe the different network topologies. **5**

Q. 7. Write short notes on any two :- **10**
(a) Multimedia applications
(b) The Internet and the services available on it
(c) Search Engines
(d) Architecture of a multimedia systems
(e) Distributed Computing