Subject Code—0371

M.C.A. (First Year) EXAMINATION

(5 Years Integrated Course)

(For Batch 2009 Onwards Main & Reappear)

COMPUTER FUNDAMENTALS

MCA-101

Time : 3 *Hours*   *Maximum Marks :* 70

Note : Attempt any *seven* questions from Section A. Section B contains *three* questions with internal choice and candidate is required to attempt any all questions.

Section A

1. How integers are represented in computers ?

2. Explain with the help of example how hexadecimal numbers are converted in decimal numbers ?

3. What is Memory ? Explain types of memory in brief.

4. Draw a block diagram of a computer. Explain the function of each of the blocks.

5. Discuss, how negative numbers are represented in binary numbering system. Discuss properties of 2's complement.

6. What is High Level Language ? Why there is a need of programming languages ?

7. Differentiate between multigramming and timesharing operating systems.

8. Explain technology used in computers in its various generations.

9. Explain Internet and WWW in detail.

10. Explain the following :
   (a) ATM Networks
   (b) Interconnecting Networks.   **7×5=35**

Section B

11. Explain floating point representation of number with suitable examples.

Or

Explain various number systems and discuss their conversions to one another with suitable examples.   **12**

12. What is an Operating System ? Discuss various functions of operating systems in detail.

Or

Explain addition and subtraction of numbers in 1's and 2's compliment notation.   **12**

13. Discuss computer network topologies and various communication protocols.

Or

Explain the following :
   (a) Binary division
   (b) Local area networks.   **11**