BCA–101(O)

B. C. A. (First Semester)
EXAMINATION, Dec., 2013

(Old Course)

Paper First

COMPUTER FUNDAMENTALS

Time : Three Hours]　　　　　　　　　[*Maximum Marks : 75*

Note : Section A is compulsory. Attempt any *seven* questions from Section B and *one* question from Section C.

Section—A

1. What is number system ? Write the difference between a positional and non-positional number system.　　7

2. Explain how a decimal number converted into binary octal and hexadecimal number and vice versa. Give an example of each conversion.　　7

Section—B

3. What are the types of memories available in the computer system ? How are they organized in the hierarchy ?　　7

4. Distinguish between the following :　　7
   (i)　Sequential mode and Random mode
   (ii)　Primary memory and Internal process or memory
   (iii)　Static RAM and Dynamic RAM

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5. What is auxiliary memory ? State at least four uses of it. 7

6. Differentiate between magnetic tape and magnetic disk. 7

7. What do you mean by optical scanning devices ? Explain any *four* such devices. 7

8. Define a flowchart. List some important reasons for using flowcharts. 7

9. Explain the three basic structures of pseudocode with suitable example. 7

10. Write and explain relationship between software and hardware. 7

11. Write and explain about MIPS and MFLOPS. Also explain how these components are related with the computer system. 7

Section—C

Note : Attempt any *one* question.

12. Write the following operations with *one* example : 12
   (i) Binary addition
   (ii) Binary subtraction

13. Write short notes on the following : 12
   (i) Hypothetical computer
   (ii) Type of processor
   (iii) Structure of Instructions

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