2428   BCA–04

B.C.A. DEGREE EXAMINATION — JANUARY, 2006.

First Year

INTRODUCTION TO COMPUTER ORGANISATION

Time : 3 hours   Maximum marks : 75

PART A — (5 × 5 = 25 marks)

Answer any FIVE questions.

1. Explain combinational circuits and sequential circuits.

2. Distinguish between a static RAM and a Dynamic RAM.

3. How are floating point numbers represented in a digital computer?

4. What are the various addressing modes available? Explain any one in detail.

5. Discuss how slow and fast peripherals are handled by 68000.

6. What are program control instructions? Explain.

7. Draw a block diagram of a general microprocessor and explain.

PART B — (5 × 10 = 50 marks)

Answer any FIVE questions.

8. Explain in detail Error detection codes.

9. Explain the internal architecture of Motorola 68000.

10. Discuss briefly about the following :

   (a) Reduced Instruction set computer.

   (b) Complex Instruction set computer.

11. Explain Zero–Address Instructions and Three–Address Instructions.

12. What is memory–mapped I/O? Explain.

13. Explain in detail shift micro operations.

14. Demonstrate by means of truth tables the validity of the following theorems of Boolean Algebra.

   (a) Associative Law.

   (b) Demorgan's Law.