

C 40956

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Name.....

Reg. No.....

**FOURTH SEMESTER B.TECH. (ENGINEERING) DEGREE
EXAMINATION, APRIL 2013 ,**

IT/CS 09 403/PTCS 09 402 – COMPUTER ORGANIZATION AND DESIGN

(Regular/Supplementary/Improvement)

(2009 Scheme)

Time : Three Hours

Maximum : 70 Marks

Part A

1. List the major building blocks of a computer.
2. Differentiate signed and unsigned numbers with examples.
3. Define an Exception.
4. Draw the memory hierarchy in terms of speed and storage.
5. Write about the metrics used to evaluate cache performance.

(5 × 2 = 10 marks)

Part B

6. Explain about the features of a 80 × 86 processors.
7. Write about SPEC 95 bench marking.
8. Write an algorithm to add two floating point numbers in 80 × 86 processors.
9. Explain the logical operations that can be implemented in 80 × 86 processors.
10. Write about multi-cycle implementation in a processor.
11. Write in detail about I/O performance measures.

(4 × 5 = 20 marks)

Part C

12. (a) Explain the different addressing modes that can be supported by the 80 × 86 processors.

Or

- (b) Explain the operations and operands of the computer hardware.

Turn over

13. (a) Explain how multiplication and division can be done in 80×86 processors.

Or

(b) Explain the addition and subtraction operations in 80×86 .

14. (a) Write in detail about microprogramming.

Or

(b) Write in detail about Pentium Pro implementation.

15. (a) Explain the working of virtual memory in detail.

Or

(b) Explain about the types and characteristics of I/O devices.

(4 × 10 = 40 marks)

