

C 58254

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Name.....

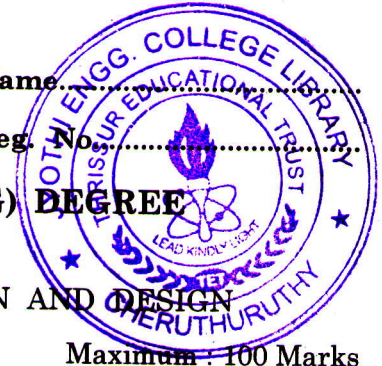
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**FOURTH SEMESTER B.TECH. (ENGINEERING) DEGREE
EXAMINATION, JUNE 2009**

CS/IT/2K 405/PTCS 2K 403—COMPUTER ORGANIZATION AND DESIGN

Time : Three Hours .

Maximum : 100 Marks



Part A

Answer all questions.

- I. (a) Briefly explain spec 95 Benchmarks.
(b) Give brief description about compilers, assembler, linker and loader.
(c) What do you mean by tested procedures ?
(d) Discuss floating point representations in detail.
(e) Explain how exceptions are handled by the processor.
(f) With the help of diagrams explain the concept of instruction memory program counter and adder.
(g) What do you mean by caches and buses ?
(h) What are the features of the caches present in the DEC station 3100 ?

(8 × 5 = 40 marks)

Part B

- II. (a) (i) Explain how instructions are represented. How they are classified ? (7 marks)
(ii) With the help of a diagram explain instruction hierarchy of a simple C program. (8 marks)
- Or
- (b) (i) Give the classification of 8086 instruction and an example for each. (7 marks)
(ii) Explain the addressing modes of a processor. (8 marks)
- III. (a) Explain constructors of an ALU. (15 marks)

Or

- (b) Explain division of two signed numbers with the help of examples. Also explain division algorithm.

(15 marks)

Turn over

IV. (a) Explain multipath implementation of datapaths in detail.

(15 marks)

Or

(b) What do you mean by Microprogramming ? How it is implemented ?

(15 marks)

V. (a) What do you mean by a bus ? With the help of diagrams explain types of buses and how they are used for connecting I/O devices to memory and processor.

(15 marks)

Or

(b) Explain design of an I/O system in details.

(15 marks)

[4 × 15 = 60 marks]