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Name : .....

Reg. No: .....

**FOURTH SEMESTER B.TECH DEGREE EXAMINATION, MAY 2012**

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

Time : Three Hours

Maximum : 70 Marks

**PART - A**

*(Answer all questions. Each question carries 2 marks)*

- (1) What do you mean by an operand?
- (2) Define an instruction.
- (3) Write the functionality of an ALU.
- (4) Define a data path.
- (5) Mention the uses of Buses. (5 × 2 = 10)

**PART - B**

*(Answer any four questions. Each question carries 5 marks)*

- (6) Explain about the SPEC95 bench marking.
- (7) Write about the metrics used to evaluate and compare the performance of computers.
- (8) Explain about the multiplication operation in 80 x 86.
- (9) Write about exceptions in a processor.
- (10) Explain about interfaces in I/O devices.
- (11) Explain about Pentium Pro memory hierarchy. (4 × 5 = 20)

**PART - C**

*(Answer all questions)*

- (12) (a) Explain about the different addressing modes supported by 80 x 86.  
(Or)  
(b) How are procedures handled in 80 x 86 ? Give examples.
- (13) (a) Explain the logical operations supported by 8086 with examples.  
(Or)  
(b) How are floating point operations done in 80 x 86. Give examples.
- (14) (a) Explain about Microprogramming in detail.  
(Or)  
(b) How are division operations carried out in 80 x 86 ? Give examples.
- (15) (a) Explain the working of virtual memory in detail.  
(Or)  
(b) Explain the cache memory mechanism and the cache performance in detail. (4 × 10 = 40)