

Roll No.

24487

B. Tech. 7th Semester (CSE)

Examination – May, 2015

ADVANCED COMPUTER ARCHITECTURE

Paper : CSE-401-F

Time : Three Hours]

[Maximum Marks : 100

Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard, will be entertained after examination.

Note : Attempt *five* questions in all. Q. No. 1 is *compulsory*. Select *one* question from each Unit.

1. (a) What is pipelined processor ? Explain.
- (b) What is On-Chip caches ?
- (c) What is memory module ?
- (d) What is multiple issue machines ?
- (e) What is virtual caches ? Explain.

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SECTION - A

2. (a) Write and explain various phases of processor project ? Explain.
(b) Explain processor evaluation matrix.
3. (a) Explain different type of instruction set.
(b) Describe three level of addressing.

SECTION - B

4. (a) What do you mean by Two-Level Caches ?
Explain.
(b) Explain different type of traffic created by instruction.
5. (a) Describe Split-I-and D-caches.
(b) An integrated cache with two reference per instruction (one I reference and, one D reference).
The data (D) references are divided: 68% reads, 32% writes 30% Dirty Lines, 8B Physical word, 64B line, 5% Read miss rate. Compute the memory traffic for a 5% miss rate for each.

SECTION - C

6. Explain models of multiple simple processors and memory.
7. (a) How to determine the waiting time, relative performance and buffer size ? Explain.
(b) Describe Open-Queue memory model in details.

SECTION - D

8. What is vector processor ? Describe vector functional units.
9. (a) What are the basic issues in multiprocessor ? Explain.
(b) Explain memory coherence in shared memory multiprocessor.