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.

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.
