

Roll No.

2415

B. E. 7th Sem. (CSE)

Examination – December, 2012

ADVANCED COMPUTER ARCHITECTURE

Paper : CSE-401-E

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 complain in this regard, will be entertained after examination.

Note : Attempt any *five* questions. All questions carry equal marks.

1. (a) Explain the instruction set types with the help of diagram.

(b) What is segmentation and segmented address? How segmented address is computed? Explain in detail.
2. (a) Write a detailed note on memory space.

(b) Explain virtual to real mapping with the help of diagram.

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3. (a) Explain the various phases of project development in detail.
- (b) Write short notes on :
- (a) Code Density
- (b) Pipelined Processors
4. (a) Explain fully associative cache memory organization in detail.
- (b) Explain the various cache write policies by giving examples.
5. (a) What do you mean by I-cache and D-cache? What is the effect of code density on cache performance? Explain in detail.
- (b) What is two level cache? What are the merits and demerits of two level caches?
6. (a) What is error detection and Correction? Explain various techniques of error detection and Correction by giving examples.
- (b) Explain Hellerman's memory model and Strecker's memory model in detail.
7. (a) What are multiple issue machines? Explain different classes of multiple issue machines in detail.
- (b) What is memory coherence? Explain memory coherence in shared memory multiprocessors.

8. Write detailed note on the following :

(a) T cycle in V-R translation

(b) Nonblocking caches

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