

ME - I Sem - COMP  
Parallel Computer Architecture

4/12/07



Con. 5148-07.

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BB-7518

(3 Hours)

[ Total Marks : 100

N.B. (1) Question No. 1 is **compulsory**.

(2) Attempt any **four** questions out of the remaining **six** questions.

1. (a) Explain cube interconnection network and Barrel shifter with example for SIMD. 10  
(b) Discuss Data flow machine architectures. State major design issues with it. 10
2. (a) Discuss different vector optimization methods. 10  
(b) Discuss different architectural classification schemes of parallel computers. 10
3. (a) What is multicache coherence problem ? Discuss the solution for it. 10  
(b) Write note on conditional critical sections and monitors. 10
4. (a) Discuss classification of pipeline processor. muadda.com 10  
(b) How is the "detection of parallelism in program" carried out in multi processor system ? 10
5. (a) What are the different associative memory organisation ? 10  
(b) Discuss in detail parallel language features for vector processing with example. 10
6. (a) Explain the operation of cache memories. Discuss design aspects of cache memories. 10  
(b) Discuss various instruction prefetch and branch control strategies with their effect on performance of pipeline processor. 10
7. Write note on any **two** of the following :- 20
  - (a) I/o processor and I/o channels
  - (b) Classification of multiprocessors operating system
  - (c) Data flow graphs.

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