Code No: OR320552 **OR**

III B.Tech II Semester Supplementary Examinations, April/May 2005
ADVANCED COMPUTER ARCHITECTURE
(Common to Computer Science & Engineering and Information Technology)

Time: 3 hours **Max Marks: 70**

Answer any FIVE Questions
All Questions carry equal marks

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1. What is meant by parallelism in uniprocessor systems? Identify the various mechanisms that have been developed for this purpose and describe them.
2. (a) What are the bottlenecks in pipeline processors? Suggest suitable methods to alleviate them.
   (b) Describe the characteristics of vector processing.
3. (a) What are the parameters that characteristics SIMD computers ?
   (b) What is masking. Explain masking mechanism
   (c) Analyse the various components in a Processing Element of an array processor.
4. (a) Discuss the steps involved in M(j,2) sorting algorithm
   (b) Describe Bit parallel Associative memory organization with suitable diagram.
5. (a) Design 8 x 8 omega network with 2 x 2 switches.
   (b) Distinguish the performance of delta network and crossbars.
6. (a) Describe performance of parallel algorithms in multiprocessor systems.
   (b) Distinguish between synchronous and asynchronous parallel algorithms.
7. (a) Explain the organization of a dynamic data flow computer.
   (b) What is data flow graph? Explain how a data flow graph constructed.
8. (a) Explain about the performance evaluation of queuing models of a computer systems.
   (b) Explain about stochastic convergence of simulation models.

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