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B.E / B.Tech ( Full Time ) DEGREE END SEMESTER EXAMINATIONS, APRIL / MAY 2013

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Semester- V

36

EC9079-PARALLEL AND DISTRIBUTED PROCESSING

(Regulations 2008)

Time: 3 Hours

Answer ALL Questions

Max. Marks 100

**PART-A (10 x 2 = 20 Marks)**

1. State the conditions to achieve parallelism.
2. Draw the n-processor PRAM architecture.
3. List the memory replacement policies.
4. Explain atomicity.
5. What are the types of pipeline techniques?
6. Differentiate between multiprocessor and multicomputer.
7. Explain Tiling.
8. What is the use of subscript separability?
9. Explain Tomasolo's algorithm.
10. What are the advantages of distributed file system?

**Part – B ( 5 x 16 = 80 marks)**

11. a) Explain the Flynn's classification of computer architecture with neat diagram.(8)  
b) Explain the mismatch between software parallelism and hardware parallelism, How it can be resolved. (8)
12. a) Explain the types of Virtual memory mapping methods.

**OR**

- b) i) Explain the properties of memory mapping. (8)  
ii) Explain bus arbitration methods. (8)
13. a) With an example explain the reservation, latency and collision free scheduling in non-linear processors.

**OR**

- b) i) Explain the cache-coherence problem in data sharing. (8)  
ii) Explain the snoopy bus protocol. (8)

14. a) List the parallel programming models and explain any three models. (8)

**OR**

b) Explain the process of Multitasking on Cray-multiprocessor. (8)

15. a) i) Explain the different types of Locks for protected Access. (8)

ii) What is Dead lock, Explain the procedure to prevent deadlock. (8)

**OR**

b) With an example explain the distributed file system.