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Total Number of Pages: 02

B.Tech
PECS5411

8th Semester / Regular Examination 2015-16

PARALLEL AND DISTRIBUTED SYSTEM

BRANCH: CSE

Time: 3 Hours

Max Marks: 70

Q.CODE: W254

**Answer Question No.1 which is compulsory and any five from the rest.
The figures in the right hand margin indicate marks.**

Q1 Answer the following questions: **(2 x 10)**

- a) What is VLIW? Explain advantages of VLIW.
- b) What is the difference between Bandwidth and Latency?
- c) What are the subclasses of Parallel random access machine (PRAMs).
- d) What is a work pool model??
- e) How UMA differ than NUMA.
- f) What is Cache hit ratio?
- g) How detail algorithm helpful in data distribution?
- h) What is the Master-slave model in Parallel algorithm?
- i) Maintaining of coherence memory explain these three states such as shared, invalid and dirty.
- j) What are the parameter require that determine the message passing communication?

Q2 a) Explain the explicitly parallelism achieve by SIMD and MIMD. **(5)**

b) What is superscalar execution explain with example? **(5)**

Q3 a) Explain the difference between store and forward and cut-through routing technique **(5)**

b) Explain message passing platform for parallel system. **(5)**

Q4 What is task decomposition? Define different type of Decomposition. **(10)**

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- Q5 a)** Explain Owner-compute rules (5)
b) Explain how to maintain cache coherence in parallel system. (5)

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- Q6 a)** What is multi stage omega Network explain interconnection establish among node with example ? (5)
b) What is static and dynamic mapping technique? Give example on each. (5)

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- Q7 a)** What is binary reflected gray code? How the mapping technique help in linear array and hypercube to send message from one node to another node. (5)
b) What is One-to-All and All-to-One broadcasting of data transfer in parallel system ? (5)

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Q8 Answer any TWO of the following (5 x 2)

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- a)** Prefix-sum operation.
b) Speed up in parallel system
c) Cannon's matrix algorithm.
d) Snoop caches.
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