Code No: 5258A.J

R15

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
M.Tech I Semester Examinations, February - 2016
PARALLEL AND DISTRIBUTED ALGORITHMS
(Computer Science and Engineering)

Time: 3hrs **Max.Marks:75**

Note: This question paper contains two parts A and B.
Part A is compulsory which carries 25 marks. Answer all questions in Part A.
Part B consists of 5 Units. Answer any one full question from each unit. Each question carries 10 marks and may have a, b, c as sub questions.

PART - A

5 × 5 Marks = 25

1.a) What are the demands for computational speed? [5]
b) Write short notes on Process Creation in message passing programming? [5]
c) Define pipelining? Explain the concept with an example. [5]
d) Discuss briefly about Shared Memory Synchronization. [5]
e) Give an example to explain BitonicMerge sort. [5]

PART - B

5 × 10 Marks = 50

2. Describe in detail about message passing multicomputer. [10]

OR

3. With a neat sketch explain how interconnected computers and be viewed as a computing platform. [10]

4. Give an example to show how N-Body Problem can be implemented using divide and conquer technique. [10]

OR

5. Explain the debugging strategies used for evaluating the parallel programs. [10]

6. Write a pipeline program to solve system of linear equations. [10]

OR

7. Give an example to show how two numbers are added using pipeline program. [10]

8. Write a Synchronous Iteration Program for Heat-Distribution Problem. [10]

OR

9. Compare and contrast between centralized and decentralized dynamic load balancing. [10]

10. Give example to explain Multiple Reader/Single Writer Policy in a Page-Based System. [10]

OR

11. Describe how Quicksort is performed on a Hypercube. [10]

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