

**B.TECH. COMPUTER SCIENCE AND  
ENGINEERING (BTCSVI)**

**Term-End Examination**

**June, 2013**

**BICSE-017 : PARALLEL ALGORITHMS**

*Time : 3 hours*

*Maximum Marks : 70*

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- Note :** (i) *Answer any seven questions.*  
(ii) *All questions carry equal marks.*
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1. Explain about various processor organizations in a parallel computing with a neat sketch. **10**
2. What is meant by MIMD ? Explain about the MIMD languages with an example. **10**
3. Explain how to implement the sum finding algorithm on a UMA multiprocessor model ? **10**
4. Write a multicomputer targeted Gauss - elimination algorithm in detail. **10**
5. Explain how travelling sales person problem is solved using branch and bound method ? **10**

6. (a) Explain about the shape notation with the help of an example. 5  
(b) Write a program to implement stack monitor in SEQUENT C. 5
7. Compare and contrast RAM model of serial computation and PRAM model of parallel computation. 10
8. Prove that the time complexity of parallel sorting algorithm is  $O(\log^2 n)$ . 10
9. (a) Differentiate control parallel algorithms and data parallel algorithms. 5  
(b) Discuss about the shuffle - exchange SIMD algorithm. 5
10. Write a sequential version of Sollin's algorithm for minimum cost spanning tree. 10
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