

**B.Tech. – VIEP – COMPUTER SCIENCE AND  
ENGINEERING (BTCSVI)**

**Term-End Examination**

00004

**June, 2017**

**BICSE-017 : PARALLEL ALGORITHMS**

*Time : 3 hours*

*Maximum Marks : 70*

**Note :** *Attempt any seven questions. Each question carries equal marks.*

1. What do you understand by parallel algorithms ?  
How are these different from the standard non-parallel algorithms ? Also explain the term Data Parallelism in detail, using suitable examples. 10
2. Explain the PRAM model of parallel computations in detail, using suitable diagrams and examples. 10
3. Explain the task of mapping data on processors for a processor array in detail. 10
4. Discuss the concept of programming parallel processes in detail. 10
5. Explain the classifying MIMD model in detail, using suitable examples. 10

6. Explain the 2D-Mesh SIMD model in detail. 10
7. Explain any *two* of the following : 5+5=10
- (a) Back Substitution
  - (b) Gaussian Elimination
  - (c) Enumeration Sort
8. Explain the Parallel quick sort algorithm in detail, using suitable examples. 10
9. Explain Manber and Ladner's algorithm in detail along with its salient applications. 10
10. Write short notes on any *two* of the following : 5+5=10
- (a) Connected Components of a Graph
  - (b) All Pair Shortest Path
  - (c) Alpha Beta Search

