

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

00864

**Term-End Examination
June, 2014**

BICSE-017 : PARALLEL ALGORITHMS

Time : 3 hours

Maximum Marks : 70

Note : Answer any **seven** questions. All questions carry equal marks.

1. (a) Define pipelining and data parallelism. Give the differences among them with diagrams. 5
(b) Explain the augmented shared memory model incorporating a sequential I/O device. 5
2. State PRAM algorithms. Explain them one by one. 10
3. Discuss the various types of processor organizations. 10
4. Explain the Flynn's taxonomy classification for serial and parallel computer architectures. 10
5. (a) Indicate the C programmer's model of parallel computation. 5
(b) What are the operations and constructs in C-LINDA ? 5

6. (a) Explain the Graham's List Scheduling algorithm. 5
- (b) State and indicate the Coffman-Graham Scheduling algorithm. 5
7. Find the sum of 16 values on a processor array organized as a 2-D mesh. Give some examples. 10
8. Write down the Fourier transform of
- (a) Inverse Discrete 5
- (b) Polynomial multiplication 5
9. Describe the parallelization of Gaussian elimination algorithm for solving a linear system. 10
10. With an example explain the Bitonic merge sort of an unsorted list of eight elements. 10
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