No. of Printed Pages : 2

BICSE-017

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

Term-End Examination

00950

December, 2017

BICSE-017 : PARALLEL ALGORITHMS

Time : 3 hours *Maximum Marks : 70*

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

1. Differentiate between Parallel and Non-parallel algorithms using suitable examples. Also explain the concept of data parallel approach with I/O in detail. *10*

2. What do you understand by Processor Arrays ? Explain in detail, the task of processor organization using suitable examples. *10*

3. Explain the salient features of the FORTRAN 90 and C* languages using suitable examples. *10*

4. Explain the concept of static scheduling on UMA multiprocessors. *10*

5. Describe the hypercube SIMD model in detail, using suitable examples. *10*

6. Describe the Discrete Fourier Transform using suitable examples. Also discuss some of its applications. *10*

7. Explain any ***two*** of the following : *5+5=10*

   (a) Multigrid Methods

   (b) Conjugate Gradient

   (c) Odd-Even Reduction

8. Explain the Odd-Even transportation sort algorithm using suitable examples. *10*

9. Explain the parallel branch and bound algorithm in detail. *10*

10. Write short notes on any ***two*** of the following : *5+5=10*

    (a) Minimum Cost Spanning Tree

    (b) Single Source Shortest Path

    (c) Parallel Alpha-Beta Search