Total No. of Questions : 8] *[Total No. of Printed Pages : 2*

Roll No .....

MCADD-805 (2)

M.C.A. (Integrated), VIII Semester

Examination, May 2024

Parallel Computing

(Elective - IV)

Time : Three Hours ***Maximum Marks : 70***

Note: i) Attempt any five questions.

ii) All questions carry equal marks.

1. a) Explain the various classifications of parallel computers in detail. 7

   b) Discuss the design issues of interconnection network in detail. 7

2. Discuss the various parallel programming models in detail. 14

3. a) List and explain various search based tools used in performance analysis. 7

   b) Explain the life cycle of a process in detail. What are the four actions for process creation? Explain each. 7

4. a) Explain VLIW Architecture. What is the condition for compacting the instruction in a VLIW instruction word? 7

   b) Solve the matrix, multiplication problem using the parallel models. 7

5. a) Explain odd-even transposition sorting method. Provide an example to understand the concept. 7

   b) Define granularity. How is parallelism achieved using grain size concept? Explain in detail. 7

6. a) Define scalar and vector processing. Discuss the merits and demerits of scalar and vector processing. 7

   b) Define 8 × 8 Benz network of 4 stage in detail. 7

7. Differentiate between control flow computing and data flow computing. Also, give an example for each. 14

8. Write short notes on the following : 14

   a) Fat Tree

   b) Asymptotic Notation

   c) Cluster Computing

   d) Open MP

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