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**Presidency University**

**Bengaluru**

**School Of Computer Science and Engineering & Information Science**

**Summer Term End-Term Examinations, Aug 2024**

**Date**:07/08/2024

**Time**: 1:00 pm-4:00 pm

**Max Marks**:100

**Weightage**:50%

**Odd Semester**: 2023-24

**Course Code**: CSE3079

**Course Name**: PARALLEL COMPUTING

**Department:CSE**

**Instructions:**

1. *Read the all questionscarefully and answer accordingly.*
2. *Do not write any matter on the question paper other than roll number.*

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| **Q.No** | **Questions** | **Marks** | **CO** | **RBT** |
| 1 | 1. Define Parallel Computing
 | 4 | CO1 | L1 |
| 1. Explain the types of parallel Systems
 | 6 | CO1 | L2 |
| 1. Execute the snippet using super Scalar Execution
 | 10 | CO1 | L3 |
| OR |
| 2 | 1. Summarize parallel processing mechanism
 | 4 | CO1 | L1 |
| 1. Classify Pipeline and Array Computers
 | 6 | CO1 | L2 |
| 1. Describe parallel processing approach
 | 10 | CO1 | L3 |

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| 3 | 1. Explain Pipeline computers
 | 4 | CO2 | L1 |
| 1. Compare SIMD and MIMD
 | 6 | CO2 | L2 |
| 1. Explain components of Uniprocessor architecture
 | 10 | CO2 | L3 |

OR

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| 4 | 1. Explain basics of Parallel processing techniques
 | 4 | CO2 | L1 |
| 1. Explain the Granularity technique
 | 6 | CO2 | L2 |
| 1. Explain Principles of Message Passing semantics
 | 10 | CO2 | L3 |

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| 5 | 1. Explain the disadvantages of Bus Topology
 | 4 | CO3 | L1 |
| 1. Describe memory interconnections
 | 6 | CO3 | L2 |
| 1. Describe Process mapping for Database Query example
 | 10 | CO3 | L3 |

OR

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| 6 | 1. List the disadvantages of DMM
 | 4 | CO3 | L1 |
| 1. Write in detail about Decomposition
 | 6 | CO3 | L2 |
| 1. Explain data decomposition
 | 10 | CO3 | L3 |

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| 7 | 1. Illustrate Task Graph
 | 4 | CO4 | L1 |
| 1. Compare speculative and hybrid decompositions
 | 6 | CO4 | L2 |
| 1. Apply intermediate data decomposition for matrix multiplication
 | 10 | CO4 | L3 |

OR

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| 8 | 1. Relate master and Slave model
 | 4 | CO4 | L1 |
| 1. Compare various parallel models
 | 6 | CO4 | L2 |
| 1. Use Speculative decomposition for solving 15 puzzle problem
 | 10 | CO4 | L3 |

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| 9 | 1. Explain RAM and Local Memory
 | 4 | CO1 | L1 |
| 1. Explain disadvantages of shared memory architecture
 | 6 | CO1 | L2 |
| 1. Use Built in routines to write MPI Program
 | 10 | CO1 | L3 |

OR

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| 10 | 1. Explain Memory module machine
 | 4 | CO2 | L1 |
| 1. Explain OpenMP usages
 | 6 | CO2 | L2 |
| 1. Discuss the MPI functions
 | 10 | CO2 | L3 |