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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 |