PRESIDENCY UNIVERSITY
BENGALURU   **SET B**

SCHOOL OF ENGINEERING
END TERM EXAMINATION - JAN 2024

Semester : Semester V - 2021   **Date :** 0Í -JAN-2024
Course Code : CSE3079   **Time :** 9:30AM - 12:30 PM
Course Name : Parellel Computing   **Max Marks :** 100
Program : B.Tech.   **Weightage :** 50%

Instructions:
(i) Read all questions carefully and answer accordingly.
(ii) Question paper consists of 3 parts.
(iii) Scientific and non-programmable calculator are permitted.
(iv) Do not write any information on the question paper other than Roll Number.

PART A

ANSWER ALL THE QUESTIONS   5 X 2M = 10M

1. Mention any 4 issues in pipeline computer design

(CO1) [Knowledge]

2. Define Prefetching.

(CO1) [Knowledge]

3. Compare UMA with NUMA.

(CO2) [Knowledge]

4. Mention any 4 decomposition techniques

(CO3) [Knowledge]

5. Define the term Thread

(CO4) [Knowledge]

PART B

ANSWER ALL THE QUESTIONS   5 X 10M = 50M

6. Explain any Two parallel processing mechanisms.

(CO1) [Comprehension]

7. Draw and Explain any four internetwork topologies

(CO2) [Comprehension]

8. Explain about various Parallel Algorithm Models

(CO3) [Comprehension]

9. Write a Program to display Fibonacci Series using OpenMP and Explain

(CO4) [Comprehension]

10. Write a program to scatter data {39, 72, 129, 42} with 4 processors using MPI and explain.

(CO4) [Comprehension]

PART C

ANSWER ALL THE QUESTIONS   2 X 20M = 40M

11. i). Explain how 16 numbers are added using various granularity approach (10)
ii). Describe about send and receiving operations in Blocking & Non-Blocking communications.(10)

(CO2) [Application]

12. Solve   the   given   problem   using   Recursive   Decomposition   technique
{28,14,52,35,18,67,09,83,21,72,22,104,03,49}
(i). Find the Smallest of given Number [10 Marks]
(ii). Sort the given list using quik sort where pivot is 49. [10 Marks]

(CO3) [Application]