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Roll No

MCADD-805 (2)
M.C.A. (Integrated), VIII Semester
Examination, May 2022
Parallel Computing
(Elective - IV)
Time : Three Hours

Maximum Marks : 70

Note: i) Attempt any five questions.

ii) All questions carry equal marks.

✓ 1. a) What is Parallel Computing? Explain in detail different paradigms of parallel computing. Also, discuss merits and demerits of parallel computation.

✓ b) Explain the concept temporal parallelism with example.

✓ 2. a) Draw the block diagram and explain Flynn's Classification of computer architectures.

II } b) Explain the super computer architecture for vector processing.

3. a) Differentiate between direct and indirect networks with neat and clean diagram.

III } b) Write a short note about bus network and what is the use of this in parallel computing?

4. a) What do you understand by point-to-point communications explain with example.

IV } b) What is the Collective Communication? Explain with example.

5. a) Discuss the Master-Slave Model in detail.
b) Explain pthread_t, Pthread_create, pthread_kill, pthread_exit APIs of POSIX thread library.

6. a) Discuss the types of Task dependencies with suitable graphs.
b) Explain the working principle of multi-cache memory in brief.

7. a) Explain coarse grained specialized temporal parallelism.
b) Explain the design and development steps of parallel processing system in brief.

8. Write short notes on given below (Any two)

- a) Scheduling Concurrency.
b) Unix workstation clusters
c) Agglomerations
d) Systolic Processors
