

Code No.: CS8202PC

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CMR ENGINEERING COLLEGE: : HYDERABAD
UGC AUTONOMOUS
I-M.TECH-II-Semester End Examinations (Supply) – September- 2023
ADVANCED COMPUTER ARCHITECTURE
(CSE)

[Time: 3 Hours]

[Max. Marks: 70]

Note: This question paper contains two parts A and B.
Part A is compulsory which carries 10 marks. Answer all questions in Part A.
Part B consists of 5 Units. Answer any one full question from each unit. Each question carries 10 marks and may have a, b, c as sub questions.

PART-A

(20 Marks)

1. a) List the two approaches for Parallel Programming. [2M]
- b) Define Grain Granularity. [2M]
- c) Write the Amdahl's law for Fixed Workload. [2M]
- d) What are Vector Processors? [2M]
- e) List out the Cache Addressing Models. [2M]
- f) Define Non-Linear Pipeline Processors. [2M]
- g) Enumerate Directory-Based Protocols. [2M]
- h) What are Vector Instruction Types? [2M]
- i) What is Shared Virtual Memory? [2M]
- j) Brief out Multithreading Issues. [2M]

PART-B

(50 Marks)

2. Explain briefly the Evolution of Computer Architecture. [10M]
- OR**
3. Compare and Contrast Hardware Vs Software parallelism. [10M]
4. Demonstrate the Evolution of Scalable Computers. [10M]
- OR**
5. Illustrate the Memory Hierarchy Technology with a neat diagram. [10M]
6. Justify the Addressing and Timing Protocols. [10M]
- OR**
7. Discuss Memory Allocation Schemes of Shared-Memory Organizations. [10M]
8. Evaluate the Snoopy Bus Protocols. [10M]
- OR**
9. Explain and Illustrate the Cache Coherence Problem. [10M]
10. Explain the Principles of Multithreading. [10M]
- OR**
11. Compare and Contrast Static Vs Dynamic Dataflow in the Evolution of Dataflow Computers. [10M]
