

Code No.: R22CS58351PE

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CMR ENGINEERING COLLEGE: : HYDERABAD
UGC AUTONOMOUS
II-M.TECH-I-Semester End Examinations (Regular) - Feb- 2024
ADVANCED COMPUTER ARCHITECTURE (PE-V)
(CSE)

[Time: 3 Hours]

[Max. Marks: 60]

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

(10 Marks)

1. a) Define Multi-vectors. [1M]
- b) Define SIMD computers. [1M]
- c) Explain about Scalability Analysis. [1M]
- d) Can you recall Scalability Approaches? [1M]
- e) What is weak consistency model? [1M]
- f) Define Pipeline Processors. [1M]
- g) Memorize cache coherence? [1M]
- h) Tell about compound vector processing. [1M]
- i) Define the term hybrid Architecture. [1M]
- j) What is meant by Multithreading? [1M]

PART-B

(50 Marks)

2. Differentiate the key differences between multiprocessors and multi Computers? [10M]
- OR**
3. Explain Parallel Computer Models? [10M]
 4. What are the fundamental principles of designing and building scalable high-performance systems? [10M]
- OR**
5. Choose some real-world examples of applications that benefit from parallel processing? [10M]
 6. Discuss the key differences between bus-based, cache-based, and shared-memory systems in terms of performance, scalability, and cost? [10M]
- OR**
7. Elaborate about the different types of cache memory organizations [10M]
 8. List out the key principles of designing parallel and scalable architectures? [10M]
- OR**
9. Explain synchronisation mechanism? [10M]
 10. Explain briefly about the different types of multithreading. [10M]
- OR**
11. Elaborate about the core principles of dataflow architectures? [10M]
