

CBCS SCHEME

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20ELD21

Second Semester M.Tech. Degree Examination, June/July 2023

Advanced Computer Architecture

Time: 3 hrs.

Max. Marks: 100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

- 1 a. Explain Flynn's classification. (10 Marks)
b. Give system attributes to performance. (10 Marks)

OR

- 2 a. Explain Data dependences. (10 Marks)
b. Explain hardware and software parallelism (10 Marks)

Module-2

- 3 a. Explain efficiency, utilization and quality. (10 Marks)
b. Explain scalability of parallel algorithms. (10 Marks)

OR

- 4 a. Discuss instruction pipelines. (10 Marks)
b. Discuss virtual memory models. (10 Marks)

Module-3

- 5 a. List the bus standard requirements. (10 Marks)
b. Explain cache performance issues. (10 Marks)

OR

- 6 a. Discuss contention free scheduling. (10 Marks)
b. Explain internal data forwarding. (10 Marks)

Module-4

- 7 a. Explain different instruction types for vector operands. (10 Marks)
b. Compare C - Y - MP, C - 90 and MPP. (10 Marks)

OR

- 8 a. Explain SCI interconnect models. (10 Marks)
b. Explain multithreading issues and solutions. (10 Marks)

Module-5

- 9 a. Discuss parallel language and compilers. (10 Marks)
b. Explain context - switching policies. (10 Marks)

OR

- 10 a. Explain dependence analysis of data arrays. (10 Marks)
b. Explain optimizing compilers for parallelism. (10 Marks)

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Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and/or equations written eg, 42+8 = 50, will be treated as malpractice.