

B.Tech IV Year I Semester (R13) Supplementary Examinations June 2018

ADVANCED COMPUTER ARCHITECTURE

(Common to CSE and IT)

Time: 3 hours

Max. Marks: 70

PART – A

(Compulsory Question)

- 1 Answer the following: (10 X 02 = 20 Marks)
- (a) What is the need for distributed shared memory architecture?
 - (b) Distinguish between control flow computers and Dataflow computers.
 - (c) What is Amdahl's law?
 - (d) List the types of buses used in computer architecture.
 - (e) What is a 2 X 2 crossbar switch? What is its function?
 - (f) What is the difference between static pipeline and dynamic pipeline?
 - (g) List the important characteristics of vector processing.
 - (h) Name some SIMD parallel algorithms and along with their complexity.
 - (i) What are the features of Tera multiprocessor system?
 - (j) What is shared virtual memory?

PART – B

(Answer all five units, 5 X 10 = 50 Marks)

UNIT – I

- 2 Explain the following computer classification: (i) SIMD. (ii) MIMD.

OR

- 3 Discuss hardware and software parallelism in detail.

UNIT – II

- 4 List the characteristics and applications of parallel processing.

OR

- 5 What is memory interleaving? Explain any two memory interleaving schemes.

UNIT – III

- 6 What is a multistage network? Describe different types of multistage network.

OR

- 7 What is cache coherence? Describe method to avoid this problem.

UNIT – IV

- 8 Discuss vector access memory schemes in brief.

OR

- 9 Demonstrate the effect of memory contention on the performance of C.MPP.

UNIT – V

- 10 What is Latency- hiding? Discuss any one Latency- hiding technique in detail.

OR

- 11 Describe MPD architecture with neat diagram.
