UNIT–I INSTRUCTION LEVEL PARALLELISM AND ITS EXPLOITATION 9

ILP – Concepts and challenges – Review of hardware techniques – Compiler techniques for exposing ILP – Static branch prediction – VLIW & EPIC – Advanced compiler support – Hardware support for exposing parallelism – Hardware versus software speculation mechanisms – IA 64 and Itanium processors – Limits on ILP.

UNIT–II MULTIPROCESSORS AND THREAD LEVEL PARALLELISM 9


UNIT–III MEMORY AND I/O 9


UNIT–IV MULTI-CORE ARCHITECTURES 9

Software and hardware multithreading – SMT and CMP architectures – Design issues – Case studies – Intel Multi-core architecture – SUN CMP architecture

UNIT–V PARALLEL PROGRAMMING AND MULTITHREADED APPLICATION DEVELOPMENT 9


TOTAL : 45 PERIODS

TEXT BOOKS:


REFERENCES: