UNIT - 01
Chapter I

Chapter II
Parallel Computer Structures: Pipeline computers - Array computers, Multiprocessor systems - performance of parallel computers.

UNIT - 02
Chapter III
Pipelining: An Overlapped Parallelism: Principles of pipelining - Classification of pipeline processors- General Pipeline and reservation table.

Chapter IV
Instruction and Arithmetic Pipelines: Design of Pipelined Instruction units - Arithmetic pipelines design example- Multi function and array pipelines.

UNIT - 03
Chapter V
Principles of designing pipeline Processors: Instructions Prefetch and Branch Handling- Data Buffering and Busing Structures

Chapter VI
Vector Processing Requirements: Characteristics of vector processing -pipeline vector processing methods.

UNIT - 04
Chapter VII

Chapter VIII
Associative Array Processing: Associative memory organization - Associative processors.

UNIT - 05
Chapter IX

Chapter X
Parallel Memory Organizations:- Interleaved memory configurations - multi cache problems and solutions. Multiprocessor Operating Systems: classification of multiprocessor operating systems-software requirements for multiprocessors- operating system requirements.

UNIT - 06
Chapter XI
Multiprocessing control and algorithms:- Inter process Communication Mechanisms: process synchronization mechanisms- synchronization with semaphores- conditional critical sections and monitors.

Chapter XII

REFERENCE BOOK: