Unit 1

Data storage and register transfer operations
Register Transfer and Micro-operations: Register Transfer language,
Register Transfer, Bus and Memory Transfers, Arithmetic Microoperations,
Logic Micro-Operations, Shift Micro-Operations, Arithmetic logical shift
Unit 2

Basic Computer Organization and Design

Instruction codes, Computer registers, computer instructions, Timing and
Control, Instruction cycle, Memory-Reference Instructions, Input-outputinterrupt, Design of Basic computer, Design of Accumulator Unit.

Unit 3

Assembly Language Programming
Introduction, Machine Language,Arithmetic and logic operations, looping constructs,

Subroutines, I-O Programming.
Unit 4

Microprogrammed Control Organization:Control Memory, Address sequencing, Micro program

example, Design of Control unit