SARDAR VALLABHBHAI PATEL INSTITUTE OF TECHNOLOGY, VASAD
COMPUTER ENGINEERING DEPARTMENT
SYLLABUS FOR MID SEM 1 EXAM

Subject Name: Computer Organization and Architecture (3140707)

Unit 1

Computer Data Representation, Basic computer data types, Complements, Fixed point representation, Floating point representation
Register Transfer and Micro-operations:
Register Transfer language, Register Transfer, Bus and Memory Transfers (Tri-State Bus Buffers, Memory Transfer), Arithmetic Micro-Operations, Logical Micro-Operations, Shift Micro-Operations, Arithmetic logical shift unit

Unit 2

Basic Computer Organization and Design:
Instruction codes, Computer registers, computer instructions, Timing and Control, Instruction cycle, Memory-Reference Instructions, Input-output and interrupt, complete computer description, Design of Basic computer, Design of Accumulator Unit.

Unit 3

Assembly Language Programming:
Introduction, Machine Language, Assembly Language Programming, Pseudo-Instructions, Address Symbol Table, Assembler – (First Pass – Second Pass)