**13CS3205-COMPUTER ORGANIZATION**

**(EEE)**

**Credits:4**

**Lectures/Week: 4 hrs Max.Sessional Marks: 40**

**Univ. Exam: 3 hrs Univ. Exam Marks: 60**

**UNIT-I**

**REGISTER TRANSFER AND MICRO OPERATIONS:** Register transfer. Bus and memory transfers, Arithmetic micro operations. Logic micro operations, Shift micro operations. Arithmetic logic shift units.

Basic Computer organization And Design: Instruction codes, computer Registers and instructions , timing and control, instruction cycles, memory reference instructions, Input Output and interrupt.

**UNIT-II**

**PROGRAMMING THE BASIC CONTROL:** Machine language, Assembly language, the assembler, programming arithmetic and logic operations, subroutines.

**MICRO PROGRAMMED CONTROL:** Control memory, address sequencing , micro program example, design of control unit.

**UNIT-III**

**CENTRAL PROCESSING UNIT:** General register organization, stack organization, instruction formats, addressing modes, program control, RISC, parallel processing, pipelining, arithmetic pipe line, instruction pipe line.

**UNIT-IV**

**INPUT – OUTPUT ORGANIZATION:** peripheral devices, input output interface, asynchronous data Transfer. Modes of transfer, priority interrupt, DMA, Input – Output Processor, Serial communication.

**UNIT-V**

**MEMORY ORGANIZATION:** Memory hierarchy, main memory, auxiliary memory, associative memory, Cache memory, virtual memory, Characteristics of multi processors, interprocessor arbitration, inter processor communication and synchronization and cache coherence

**TEXT BOOKS:**

1. Computer System Architechture 3/e M.Moris Mano PHI-I
2. Computer Organization – V.C. Hemacher, Z.G.Vranesic and others Mc-Graw-Hill

# REFERENCES:

 1. Computer architechutre and organization –Hays& Briggs –PHI

 2. Computer Organization Willium stallings PHI