**13CS3207-COMPUTER ORGANIZATION**

**(ECE)**

**Lectures/Week:4Hrs. Sessional Marks:40**

**Univ. Exam. Duration:3Hrs 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

# Reference Books:

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

2. Computer Organization Willium stallings PHI