

**Discipline** : Computer Science and Engineering  
**Subject** : Computer architecture and organization

Week	Theory		Topic Covered Date and Remarks		
	Lecture	Topic (Including Assignment/Test)	Date	HOD	Director-Principal
1 <sup>st</sup>	1.	Basic Boolean algebra and logic gates			
	2.	Combinational logic blocks			
	3.	Adder subtractor and multiplexers			
2 <sup>nd</sup>	4	Sequential logic blocks			
	5	Flip flops,register,counter			
	6	Flynn's classification			
3 <sup>rd</sup>	7	Multilevel viewpoint of a machine			
	8	Digital logic			
	9	Micro architectures			
4 <sup>th</sup>	10	Operating systems			
	11	Performance matrix			
	12	Cpu architecture types			
5 <sup>th</sup>	13	Computer registers, stack memory			
	14	Detailed data path of a typical cpu			
	15	Computer organization concept			
6 <sup>th</sup>	16	Stored program concept			
	17	Instruction codes , Instruction cycles			
	18	Timing and control, Types of instructions			
7 <sup>th</sup>	<b>1<sup>st</sup> Minor Test</b>				
8 <sup>th</sup>	19	Memory reference ,register reference			
	20	I/o reference instructions			
	21	Accumulator logic			
9 <sup>th</sup>	22	Control memory			
	23	Introduction to parallelism			
	24	Goals of parallelism and Amdahl's law			
10 <sup>th</sup>	25	Instruction level parallelism			
	26	Processor level parallelism			
	27	Pipelining and its features			
11 <sup>th</sup>	28	Super scaling overview			
	29	Multiprocessor systems overview			
	30	Memory hierarchy			
12 <sup>th</sup>	31	I/O techniques			
	32	Need of memory and examples			
	33	Cache memory and main memory			

13 <sup>th</sup>	34	Stack organization, Instruction formats			
	35	Addressing modes, Types of various modes			
	36	Address sequencing, Instruction set architectures			
14 <sup>th</sup>		<b>2<sup>nd</sup> Minor Test</b>			
15 <sup>th</sup>	37	Micro instructions, Classification of processors			
	38	Micro program sequencer, Ram and Rom organization			
	39	Implementation of control unit, DMA modes of transfer			