

LESSON PLAN

| Contact Hour (Cumulative) | Unit No. | Topic | Teaching(*) Methodology | Remark |
|------------------------------|-------------|---|----------------------------|--------|
| 1 | 1 | Introduction: Why study this course. Motivational example | OHP/Black Board | |
| 2 | 1 | Computer types | OHP/Black Board | |
| 3 | 1 | functional units | OHP/Black Board | |
| 4 | 1 | Basic operational concepts of a computer, Bus structure | OHP/Black Board | |
| 5 | 1 | Instruction set architecture of a CPU, Instruction execution cycle | OHP/Black Board | |
| 6 | 1 | Register transfer language Arithmetic Microoperations | OHP/Black Board | |
| 7 | 1 | Logic Arithmetic Microoperations | OHP/Black Board | |
| 8 | 1 | Logic Microoperations | OHP/Black Board | |
| 9 | 1 | Arithmetic Logic Shift Unit. | OHP/Black Board | |
| 10 | 1 | Addressing modes | OHP/Black Board | |
| 11 | 1 | Instruction set CISC and RISC | OHP/Black Board | |
| 12 | 1 | Unit-1 Summary. | OHP/Black Board | |
| 13 | 2 | Introduction to data representation | OHP/Black Board | |
| 14 | 2 | Signed number representation, fixed and floating point representation | OHP/Black Board | |
| 15 | 2 | Addition and Subtraction of unsigned numbers | OHP/Black Board | |
| 16 | 2 | Ripple carry adder, carry look ahead adder | OHP/Black Board | |
| 17 | 2 | multiplication - shift and add | OHP/Black Board | |
| 18 | 2 | Booth multipliers | OHP/Black Board | |
| 19 | 2 | Array multiplier | OHP/Black Board | |
| 20 | 2 | Division restoring and non-restoring techniques | OHP/Black Board | |

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| 21 | 2 | floating point arithmetic | OHP/ Black Board | |
| 22 | 2 | Unit-11 Summary | OHP/ Black Board | |
| 23 | 3 | Memory system Introduction memory Hierarchy | OHP/ Black Board | |
| 24 | 3 | main memory RAM | OHP/ Black Board | |
| 25 | 3 | ROM chips | OHP/ Black Board | |
| 26 | 3 | Associative memory - H/W organization | OHP/ Black Board | |
| 27 | 3 | Cache memory - Associative mapping | OHP/ Black Board | |
| 28 | 3 | Cache memory - direct mapping, Set-associative mapping | OHP/ Black Board | |
| 29 | 3 | Virtual memory | OHP/ Black Board | |
| 30 | 3 | Unit-III Summary | OHP/ Black Board | |
| 31 | 34 | Peripheral device Introduction | OHP/ Black Board | |
| 32 | 34 | Input-output interface | OHP/ Black Board | |
| 33 | 34 | I/O Bus and Interface modules. I/O vs Memory Bus | OHP/ Black Board | |
| 34 | 34 | Isolated vs memory-mapped I/O | OHP/ Black Board | |
| 35 | 34 | Asynchronous data transfer | OHP/ Black Board | |
| 36 | 34 | Modes of transfer | OHP/ Black Board | |
| 37 | 34 | Priority Interrupt | OHP/ Black Board | |
| 38 | 34 | Direct Memory Access | OHP/ Black Board | |
| 39 | 4 | Unit-IV Summary | OHP/ Black Board | |
| 40 | 35 | Introduction to Parallel Processing | OHP/ Black Board | |

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| 41 | 45 | Basic concepts of Pipelining | OHP/ Black Board | |
| 42 | 45 | Arithmetic Pipeline, throughput | OHP/ Black Board | |
| 43 | 45 | Instruction Pipeline | OHP/ Black Board | |
| 44 | 45 | Pipeline Hazards | OHP/ Black Board | |
| 45 | 45 | Vector Processing | OHP/ Black Board | |
| 46 | 45 | Array Processor | OHP/ Black Board | |
| 47 | 45 | Unit - IV Summary | OHP/ Black Board | |
| 48 | 56 | Characteristics of Multiprocessors | OHP/ Black Board | |
| 49 | 56 | Interconnection Structures | OHP/ Black Board | |
| 50 | 56 | Interprocess Arbitration | OHP/ Black Board | |
| 51 | 56 | Interprocess Communication and Synchronization | OHP/ Black Board | |
| 52 | 56 | Cache Coherence | OHP/ Black Board | |
| 53 | 6 | Unit VI Summary | OHP/ Black Board | |
| 54 | 6 | Beyond the Syllabus | OHP/ Black Board | |
| 55 | 6 | Discussion of important questions for examination | OHP/ Black Board | |
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