**LESSON PLAN**

**Name of the Faculty: Poonam Mehta**

Discipline: Computer Engineering

Department: Computer Engineering

Semester: 4th

Subject: Computer Organization

Lesson Plan Duration: 15 weeks

**\*\*Work load (Lecture / Practical) per week (in hours): Lectures-04**

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| Week | Theory | |
| Lecture Day | Topic (including assignments /tests) |
| 1st Week | 1st | **Unit-1:- CPU organization** |
| 2nd | general register organisation |
| 3rd | Stack organization |
| 4th | Instruction formats : Introduction |
| Week 2 | 1st | Three address, two address, |
| 2nd | One address, zero address |
| 3rd | RISC instruction |
| 4th | Addressing modes: Immediate, register |
| Week 3 | 1st | Direct, in direct,. |
| 2nd | Relative, indexed |
| 3rd | Reduced instruction set computers Reduced instruction set computers |
| 4th | CISC/RISC characteristics |
| Week 4 | 1st | Comparison between CISC & RISC |
| 2nd | Assignment & Discussion on unit 1 |
| 3rd | **Unit-2 Memory organization:** Basics About Memory |
| 4th | Memory Hierarchy |
| Week 5 | 1st | RAM and ROM chips/ memory address map |
| 2nd | Memory connections to CPU |
| 3rd | Auxillary memory : Magnetic disks , magnetic tapes |
| 4th | Associative memory, cache memory, virtual memory |
| Week 6 | 1st | Memory management hardware, Read & Write Operation |
| 2nd | 1st sessional test |
| 3rd | **Unit-3 :-I/O organization:** Basis Input output system(BIOS) |
| 4th | Function of BIOS |
| Week 7 | 1st | Testing and initialization |
| 2nd | Configuring the system |
| 3rd | Assignment on BIOS |
| 4th | Modes of Data Transfer |
| Week 8 | 1st | Programmed I/O |
| 2nd | Synchronous, asynchronous and interrupt initiated |
| 3rd | Synchronous, asynchronous and interrupt initiated |
| 4th | DMA data transfer |
| Week 9 | 1st | Assignment on modes of Data Transfer |
| 2nd | Test |
| 3rd | **Unit- 4:-Architecture of multiprocessor systems :** Introduction about Multi processor systems |
| 4th | Architecture of multiprocessor systems |
| Week 10 | 1st | Forms of parallel processing |
| 2nd | Parallel processing and pipelines |
| 3rd | Basic characteristics of multiprocessor |
| 4th | Assignment on multiprocessor System |
| Week 11 | 1st | General purpose multiprocessors’ |
| 2nd | Interconnection networks : time shared common bus |
| 3rd | multi port memory |
| 4th | cross bar switch |
| Week 12 | 1st | multi stage switching networks and hyper cube structures |
| 2nd | multi stage switching networks and hyper cube structures |
| 3rd | Assignment on Interconnection networks |
| 4th | Test |
| Week 13 | 1st | Unit-5 :-I/O Interface |
| 2nd | Define I/O Interface |
| 3rd | Input output interface |
| 4th | Explain methods of Asynchronous Data transfer |
| Week 14 | 1st | Synchronous data transfer |
| 2nd | Strobe control |
| 3rd | Handshaking |
| 4th | Describe Asynchronous Serial Transfer |
| Week 15 | 1st | Assignments |
| 2nd | Sessional test |
| 3rd | Revision of all units |
| 4th | Revision of all units |