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| No. of the Unit | Name of the Concept | No. of Classes Required |
|    Unit-1 | **Basic Structure Of Computers** |  |
| Functional unit | 1 |
| Basic Operational concepts | 1 |
| Bus structures | 1 |
| System Software | 1 |
| Performance | 2 |
| The history of computer development | 2 |
|   Unit-2 | **Machine Instruction and Programs** |  |
| Register Transfer Notation | 1 |
| Assembly Language Notation | 1 |
| Basic Instruction Types, | 1 |
| Addressing Modes | 2 |
| Basic Input/output Operations | 1 |
| The role of Stacks and Queues in computer programming equation | 2 |
| Logic Instructions | 1 |
| shift and Rotate Instructions | 1 |
|  Unit-3 | **Type of Instructions** |  |
| Arithmetic and Logic Instructions | 2 |
| Branch Instructions | 1 |
| Addressing Modes | 2 |
| Input/output Operations | 2 |
|    Unit-4 | **INPUT/OUTPUT ORGANIZATION** |  |
| Accessing I/O Devices | 1 |
| Interrupts: Interrupt Hardware | 2 |
| Enabling and Disabling Interrupts | 1 |
| Handling Multiple Devices | 1 |
| Direct Memory Access | 2 |
| Synchronous Bus, Asynchronous Bus | 1 |
| Interface Circuits, Peripheral Component Interconnect (PCI) Bus, Universal Serial Bus (USB) | 2 |
|  Unit-5 | **The MEMORY SYSTEMS** |  |
| Basic memory circuits | 1 |
| Memory System Consideration | 1 |
| ROM, PROM, EPROM, EEPROM, Flash Memory | 1 |
| Cache Memories: Mapping Functions | 2 |
| INTERLEAVING | 1 |
| Magnetic Hard Disks, Optical Disks | 1 |
|  Unit-6 | **Processing Unit &Micro programmed Control** |  |
| Register Transfers, Performing An Arithmetic OrLogic Operation | 2 |
| Fetching A Word From Memory | 1 |
| Execution of Complete Instruction | 1 |
| Hardwired Control | 1 |
| Microinstructions | 1 |
| Micro program Sequencing | 2 |
| Wide Branch Addressing Microinstructions with next –Address Field | 2 |
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| TOTAL NUMBER OF CLASSES REQUIRED | 52 |