Computer Organization syllabus for CS 3 Sem 2017 scheme | VTU CBCS 17CS34 Syllabus

VTU Syllabus CS 2017 Scheme 3 SEM Computer Organization

Module-1	Basic Structure of Computers	10 hours

Basic Structure of Computers: Basic Operational Concepts, Bus Structures, Performance – Processor Clock, Basic Performance Equation, Clock Rate, Performance Measurement. Machine Instructions and Programs: Memory Location and Addresses, Memory Operations, Instructions and
Instruction Sequencing, Addressing Modes, Assembly Language, Basic Input and Output Operations, Stacks and Queues, Subroutines, Additional Instructions, Encoding of Machine Instructions

Module-2	Input/Output Organization	10 hours

Input/Output Organization: Accessing I/O Devices, Interrupts – Interrupt Hardware, Enabling and
Disabling Interrupts, Handling Multiple Devices, Controlling Device Requests, Exceptions, Direct Memory Access, Buses Interface Circuits, Standard I/O Interfaces – PCI Bus, SCSI Bus, USB.

Module-3	Memory System	10 hours

Memory System: Basic Concepts, Semiconductor RAM Memories, Read Only Memories, Speed, Size, and Cost, Cache Memories – Mapping Functions, Replacement Algorithms, Performance Considerations, Virtual Memories, Secondary Storage.

Module-4	Arithmetic	10 hours

Arithmetic: Numbers, Arithmetic Operations and Characters, Addition and Subtraction of Signed

Multiplication, Fast Multiplication, Integer Division, Floating-point Numbers and Operations.

Module-5	Basic Processing Unit	10 hours

Basic Processing Unit: Some Fundamental Concepts, Execution of a Complete Instruction, Multiple Bus Organization, Hard-wired Control, Micro programmed Control. Pipelining, Embedded Systems and Large Computer Systems: Basic Concepts of pipelining, Examples of Embedded Systems, Processor chips for embedded applications, Simple Microcontroller, The structure of General-Purpose Multiprocessors.