Syllabus Coverage CAT 1**:Module 1 :Introduction and overview of computerArchitecture:**

Introduction to computer systems Overview of Organization and Architecture –

Functional components of a computer

-Registers and register files

-Interconnection of components-

Organization of the von Neumann machine and Harvard architecture-

Performance of processor.

Module 3:Fundamentals of Computer ArchitectureIntroduction to ISA (Instruction Set Architecture)

-Instruction formats-

instruction types

addressing modes-

Instruction execution (Phases of instruction cycle) [IF ID RD EX WB]

-Assembly languageprogramming-Subroutine call and return mechanisms.•

Module 2:Data Representation And ComputerArithmeti

Fixed point representation of numbers-algorithms for arithmetic operations•

Simple unsigned numbers representation.•

Representation of data(negative numbers)

1.signed magnitude

2.signed 1’s complement

3.signed 2’s complement•

Signed magnitude numbers Addition,Subtraction and multiplication(Algorithm for MUL operation)