

UNIT - V

Inheritance : Need for Inheritance , Different forms of inheritance , Derived and base classes : single Inheritance , Multiple Inheritance , Multi level Inheritance , Hierarchical Inheritance and hybrid Classes. Visibility Modes , Inheritance and Access control , Virtual Base Classes , Abstract Classes, Constructors in Multiple Inheritance.

Virtual Functions and Polymorphism : Pointers to objects, Pointers to Derived Classes , Virtual Functions , Pure Virtual Functions.

Recommended Book :

- 1. Object Oriented Programming with C++ :- E. Balaguruswamy**

Paper-III : Computer Organization

UNIT - I

Instruction codes : Introduction , Stored program organization , Indirect address, computer registers , common bus system.

Register transfer language , register transfer, Bus and memory transfer, Three state bus buffer. Arithmetic Micro operations, Logic micro operations, Shift micro operation. Binary Adder, Binary Incrementer , Arithmetic circuits.

UNIT -II

Computer instructions : Basic computer Instructions , Instruction set completeness , Timing and Control. Instruction Cycle : Fetch and Decode, Type of instructions , Register- Reference Instructions, Memory - Reference Instructions , Input-Output Instructions. Interrupt Cycle.

UNIT - III

CPU : Introduction, General Register organization, control word , Example of micro operations , Stack Organization , register stack, memory stack , Instruction Formats : Three-address Instructions, Two-address Instructions , one-address Instructions, Zero-address Instructions.

Addressing modes : Implied, Immediate , Register , Register Indirect , Auto increment or Auto decrement , Direct Address , Indirect Address , Relative Address , Indexed Addressing , Base Register Addressing Mode.

UNIT - IV

Asynchronous Data Transfer , Handshaking Asynchronous Serial Transfer, Modes of Transfer : DMA Transfer.

Main memory : RAM and ROM chips, Auxiliary Memory : Magnetic Disk , Associative Memory , Cache memory , Direct mapping Scheme.

UNIT - V

Microprocessor Architecture :Introduction to Microprocessor 8085 , ALU , Timing and Control Unit, Registers , Data and Address Bus.

Instruction Set of intel 8085 : Data Transfer Group , Arithmetic Group , Logic Group , branch control Group , Input/ Output and Machine Control Group.

Recommended Book :

- 1. Computer Organisation :- Mano M.M.**
- 2. Fundamentals of microprocessors and Microcomputers :- B.Ram**