



- 6.3 Virtual Machines, Code Generation, Loop Optimization.
- 6.4 Concept of Procedural Programming, Structural Programming, Object-Oriented Programming.
- 6.5 Concept of C programming, C++ Programming,
- 6.6 Java Programming for Declaration, Modularity and Storage Management Software Development.
7. **Networking**
  - 7.1 **Basic Network Theory:** Network Definition, Network Models, Connectivity, Network Addressing.
  - 7.2 **Network Connectivity:** The Data Package, Establishing a Connection, Reliable Delivery, Network Connectivity, Noise Control, Building Codes, Connection Devices.
  - 7.3 **Advanced Network Theory:** The OSI model, Ethernet, Network Resources, Token ring, FDDI, Wireless Networking.
  - 7.4 **Common Network Protocols:** Families of Protocols, NetBEUI, Bridge and Switches, The TCP/IP Protocol, Building TCP/IP Network, The TCP/IP Suite
  - 7.5 **TCP/IP Services:** Dynamic Host Configuration Protocol, DNS Name Resolution, NetBIOS support, SNMP, TCP/IP Utilities, FTP
  - 7.6 **Network LAN Infrastructure:** LAN Protocols on a Network, IP Routing, IP Routing Tables, Router Discovery Protocols, Data Movement in a Routed Network, Virtual LANs(VLANS)
  - 7.7 **Network WAN Infrastructure:** The WAN Environment, Wan Transmission Technologies, Wan Connectivity Devices, Voice Over Data Services
  - 7.8 **Remote Networking:** Remote Networking, Remote Access protocols, VPN Technologies.
  - 7.9 **Computer Security:** Computer Virus, Worm, Trojan Horse.
  - 7.10 **Network Security:** Introduction, Virus Protection, Local Security, Network Access, Internet Security.
  - 7.11 **Disaster Recovery:** The need for Disaster Recovery, Disaster Recovery plan, Data backup, Fault Tolerance.
  - 7.12 **Advanced Data Storage Techniques:** Enterprise Data Storage, Clustering, Network Attached Storage, Storage Area Networks.
  - 7.13 **Network Troubleshooting:** Using Systematic Approach to Troubleshooting.
  - 7.14 **Network Support Tools:** Utilities, The Network Baseline.
  - 7.15 Network Access Points (NAP), Common Network Component, Common Peripheral Ports.
8. **Computer Architecture & Organization**
  - 8.1 Evaluation of Computers, Design Methodology, Set Architecture, MIPS ISA, ALU Design.
  - 8.2 **Datapath Design:** Single and Multiple Cycle Implementations, Pipelining, Memory Hierarchy, Input/Output System: Bus & Role of Operating System.
9. **Compiler Design**
  - 9.1 Introduction to Compiling,
  - 9.2 Logical Analysis, Syntax Analysis, Semantic Analysis,
  - 9.3 Run Time environment,
  - 9.4 Intermediate Code Generation, Code Optimization,
  - 9.5 Compiler Generation Tools.
10. **E-Commerce Technology**
  - 10.1 Introduction to E-Commerce.
  - 10.2 Electronic Commerce Strategies.
  - 10.3 Electronic Commerce Security Issues.
  - 10.4 Success Models of E-Governance.
  - 10.5 **E-Business:** b2b, b2c, b2e, c2c, g2g, g2c.
  - 10.6 Principles of Electronic Payment, Strategies & Systems.
  - 10.7 E-marketing, Reverse Engineering.