

UNIT - 7**6 Hours**

Run-Time Environments: Storage Organization; Stack allocation of space; Access to non-local data on the stack; Heap management; Introduction to garbage collection.

UNIT - 8**7 Hours**

Code Generation: Issues in the design of Code Generator; The Target Language; Addresses in the target code; Basic blocks and Flow graphs; Optimization of basic blocks; A Simple Code Generator

Text Books:

1. Alfred V Aho, Monica S.Lam, Ravi Sethi, Jeffrey D Ullman: Compilers- Principles, Techniques and Tools, 2nd Edition, Pearson Education, 2007.
(Chapters 1, 3.1 to 3.4, 4 excluding 4.7.5 and 4.7.6, 5.1 to 5.4, 6.1, 6.2, 6.4, 6.6, 6.7 to 6.9, 7.1 to 7.5, 8.1 to 8.6.)

Reference Books:

1. Charles N. Fischer, Richard J. leBlanc, Jr.: Crafting a Compiler with C, Pearson Education, 1991.
2. Andrew W Apple: Modern Compiler Implementation in C, Cambridge University Press, 1997.
3. Kenneth C Loudon: Compiler Construction Principles & Practice, Cengage Learning, 1997.

COMPUTER NETWORKS - II**Subject Code: 10CS64****I.A. Marks : 25****Hours/Week : 04****Exam Hours: 03****Total Hours : 52****Exam Marks: 100****PART - A****UNIT - 1****6 Hours**

Packet Switching Networks - 1: Network services and internal network operation, Packet network topology, Routing in Packet networks, Shortest path routing: Bellman-Ford algorithm.

UNIT - 2**6 Hours**

Packet Switching Networks - 2: Shortest path routing (continued), Traffic management at the Packet level, Traffic management at Flow level, Traffic management at flow aggregate level.

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UNIT - 3

6 Hours

TCP/IP-1: TCP/IP architecture, The Internet Protocol, IPv6, UDP.

UNIT - 4

8 Hours

TCP/IP-2: TCP, Internet Routing Protocols, Multicast Routing, DHCP, NAT and Mobile IP.

PART - B

UNIT - 5

7 Hours

Applications, Network Management, Network Security: Application layer overview, Domain Name System (DNS), Remote Login Protocols, E-mail, File Transfer and FTP, World Wide Web and HTTP, Network management, Overview of network security, Overview of security methods, Secret-key encryption protocols, Public-key encryption protocols, Authentication, Authentication and digital signature, Firewalls.

UNIT - 6

6 Hours

QoS, VPNs, Tunneling, Overlay Networks: Overview of QoS, Integrated Services QoS, Differentiated services QoS, Virtual Private Networks, MPLS, Overlay networks.

UNIT - 7

7 Hours

Multimedia Networking: Overview of data compression, Digital voice and compression, JPEG, MPEG, Limits of compression with loss, Compression methods without loss, Overview of IP Telephony, VoIP signaling protocols, Real-Time Media Transport Protocols, Stream control Transmission Protocol (SCTP)

UNIT - 8

6 Hours

Mobile AdHoc Networks and Wireless Sensor Networks: Overview of Wireless Ad-Hoc networks, Routing in AdHoc Networks, Routing protocols for and Security of AdHoc networks, Sensor Networks and protocol structures, Communication Energy model, Clustering protocols, Routing protocols, ZigBee technology and 802.15.4.



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Text Books:

1. Communication Networks – Fundamental Concepts & key architectures, Alberto Leon Garcia & Indra Widjaja, 2nd Edition, Tata McGraw-Hill, India
(7 - excluding 7.6, 8)
2. Computer & Communication Networks, Nadir F Mir, Pearson Education, India
(9, 10 excluding 10.7, 12.1 to 12.3, 16, 17.1 to 17.6, 18.1 to 18.3, 18.5, 19, 20)

Reference Books:

1. Behrouz A. Forouzan: Data Communications and Networking, 4th Edition, Tata McGraw-Hill, 2006.
2. William Stallings: Data and Computer Communication, 8th Edition, Pearson Education, 2007.
3. Larry L. Peterson and Bruce S. Davie: Computer Networks – A Systems Approach, 4th Edition, Elsevier, 2007.
4. Wayne Tomasi: Introduction to Data Communications and Networking, Pearson Education, 2005.

COMPUTER GRAPHICS AND VISUALIZATION

Subject Code: 10CS65
Hours/Week : 04
Total Hours : 52

I.A. Marks : 25
Exam Hours: 03
Exam Marks: 100

PART - A**UNIT – 1****7 Hours**

Introduction: Applications of computer graphics; A graphics system; Images: Physical and synthetic; Imaging Systems; The synthetic camera model; The programmer's interface; Graphics architectures; Programmable Pipelines; Performance Characteristics
Graphics Programming: The Sierpinski gasket; Programming Two Dimensional Applications.

UNIT – 2**6 Hours**

The OpenGL: The OpenGL API; Primitives and attributes; Color; Viewing; Control functions; The Gasket program; Polygons and recursion; The three-dimensional gasket; Plotting Implicit Functions

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