

Class - BCA - 4<sup>th</sup> sem

Sub - Adv. Data Structures

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05/4/22 - 30/4/22 -

Unit-I

Tree - Intro<sup>n</sup>, Representation, Traversals and algos, BST: Intro<sup>n</sup>, Storage, Searching, Insertion and deletion in a BST, Huffman's algorithm, General Trees

Unit-II

Graph: Intro<sup>n</sup>, Terminology, Sequential & Linked representation, operations on Graphs, Traversals algos, Warshall's algo, Dijkstra algo for Shortest path.

Test 1

01/5/22 - 31/05/22 -

Unit-III

Sorting methods & comparisons  
Searching algorithms & their complexities

Test 2

01/6/22 - 30/6/22 :

Unit-IV

Files: Intro<sup>n</sup>, Attributes, Classification, operations, Comparison of various types of files, file Org<sup>n</sup>  
Hashing  
Test 3

Class: BCA - 6<sup>th</sup> Sem

Sub: Internet Technologies

05/4/22 - 30/4/22 - Unit - I

Internet: Intro<sup>n</sup>, History, Internet Services; TCP/IP: Architecture, layers, TCP/IP and OSI models, www - The Client Side, The Server Side, Creating & Searching Info<sup>n</sup> on the Web, Search Engines, URL, HTTP, Web browsers, Chat & Bulletin Board, USENET & NNTP, Internet vs Intranet.

Unit - II

• TCP, UDP, IP Protocols & their formats, IPv4, IPv6, DNS, TCP Connection Mgmt, ARP, RARP, DHCP, ICMP, IGMP.  
Port Numbers  
Test 1

01/5/22 - 31/5/22 - Unit II

IPv4 Addressing, RPC  
Unit III App. layer: E-mail, Architecture, Protocol - SMTP, MIME, POP, IMAP, File Access & Transfer, FTP, Anonymous FTP, TFTP, NFS, TELNET, VoIP, Video over IP: RTP, RTCP, IP Telephony and Signaling, RSVP.  
Test 2

01/6/22 - 30/6/22 -

Unit-IV

Routing in Internet: RIP, OSPF, BGP, Internet Multicasting, Mobile IP, NAT, VPN, Internet Mgmt. and SNMP, Internet Security: E-mail Security, Web Security, Firewall, Intro<sup>n</sup> to IPsec & SSL.

Test 3

Class - BCA - 2<sup>nd</sup> Sem

Sub - Adv. Prog. in C

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05/4/22 - 30/4/22 -

Unit - I

Strings, Structure and Union  
Typedef, Enumerations with  
Programs.

Test 1

Unit - II

Pointers, Pointers & Functions

01/5/22 - 31/5/22

Unit - II

Pointers & Strings, Dynamic  
allocation using Pointers

Unit - III

Files and related concepts.

Test 2

01/6/22 - 30/6/22

Unit - IV

Preprocessor, Command Line  
Arguments with Programs

Test 3

Class - B.Com (CAV) - 2<sup>nd</sup> Sem

Sub - E-Commerce

05/4/22 - 30/4/22 :

Unit-I.

Intro<sup>n</sup> to Internet : Concept, Application and Uses of Internet, Internet Services, IT and Business, Concepts of Data, Info<sup>n</sup>.

Intro<sup>n</sup> to E-Commerce, www, Effects of IT on Business  
Practical - Working on Internet & Search Engines, Conn<sup>n</sup> through Internet

Test 1

01/5/22 - 31/05/22 - Info<sup>n</sup> System, Types of Info<sup>n</sup> System: TPS, MIS

E-Commerce Models: B2B, B2C, C2C, EDI : Benefits & Components of EDI, EDI Implementation,

Practical - Use of Online Sources, Working Social w/wing Sites

Test 2

01/6/22 - 30/6/22 - Security Issues in E-Commerce, M-Commerce & e-Governance: Practical - E-Governance Initiatives: E-disha, digital locker, apps.

Test 3