Government College Aharwala, Bilaspur (Yamunanagar)
Lesson Plan (Session- 2023-24)
(Odd Semester)

Name of Teacher: Dr. Satnam Singh
Department : Computer Science
Class & Semester: B.C.A. 5TH Sem.
Subject & Code: BCA-354: Computer Networks

JULY

Introduction to Data Communication and Computer Networks; Uses of Computer Networks; Types of Computer Networks and their Topologies; Network Hardware Components: Connectors, Transceivers, Repeaters,

AUG

Hubs, Network Interface Cards and PC Cards, Bridges, Switches, Routers, Gateways; Network Software: Network Design issues and Protocols; Connection-Oriented and Connectionless Services; OSI Reference Model; Networking Models: Distributed Systems, Client/Server Model, Peer-to-Peer Model, Web-Based Model and Emerging File-Sharing Model; Analog and Digital data and signals; Bandwidth and Data Rate, Capacity, Baud Rate; Transmission Impairment; Data Rate Limits;

SEP

Guided Transmission Media; Wireless Transmission ; Communication Satellites; Switching and Multiplexing; Modems and Modulation techniques; ADSL and Cable Modems; Data Link Layer Design issues; Error Detection and Correction; Sliding Window Protocols

OCT

One-bit, Go Back N and Selective Repeat; Media Access Control: ALOHA, Slotted ALOHA, CSMA, Collision free protocols; Introduction to LAN technologies: Ethernet, Switched Ethernet, Fast Ethernet, Gigabit Ethernet; Token Ring; Introduction to Wireless LANs and Bluetooth; VLANs Routing Algorithms: Flooding, Shortest Path Routing, Distance Vector Routing;

NOV

Link State Routing, Hierarchical Routing; Congestion Control; Traffic shaping; Choke packets; Load shedding; Elements of Transport Protocols; Network Security Issues: Security attacks; Encryption methods; Digital Signature; Digital Certificate.

Government College Aharwala, Bilaspur (Yamunanagar)
Lesson Plan (Session- 2023-24)
(Odd Semester)

Name of Teacher: Dr. Satnam Singh
Department : Computer Science
Class & Semester: B.C.A. 5TH Sem.
Subject & Code: BCA-356: Multimedia Tools

JULY
Multimedia: Basic Concept, Definition, Components & Applications of Multimedia; Hypermedia and Multimedia; Multimedia Hardware and Software;

AUG
Multimedia Software Tools; Presentation Tools; Multimedia Authoring: Introduction, Features, Types of Authoring Tools: Card or Page-Based, Icon- Based, Time-Based, Object-Oriented; VRML: History, Features Images: Graphics/Image Data Types,

SEP
File Formats; Color Models in Images and Video; Video: Introduction, Types of Video Signals; Analog and Digital Video; Analog Video Standards: NTSC, PAL, SECA; Digital Video Standards: Chroma Subsampling, CCIR Standards, HDTV Digital Audio: Basic Concepts, Analog vs. Digital Audio, Digitization of Sound; Digital Audio File Formats, MIDI Quantization and Transmission of Audio: Coding of Audio;

OCT
Pulse Code Modulation; Differential Coding of Audio; Lossless Predictive Coding; DPCM; DM; ADPCM Compression Techniques: Introduction, Types of Data Compression, Run-Length Coding, Variable- Length Coding, Dictionary-Based Coding, Transform Coding

NOV
Image and Video Compression Techniques: JPEG Standard for Image Compression; JPEG Mode, Video Compression Techniques: H.261, H.263, MPEG.

Government College Aharwala, Bilaspur (Yamunanagar)
Lesson Plan (Session- 2023-24)
(Odd Semester)

Name of Teacher: Dr. Satnam Singh
Department : Computer Science
Class & Semester: B.C.A./B.Sc. Phy. Sci./ B.Sc. Life Sci./B.Com Gen./ B.Com CAV/B.A. 1ST Sem.(NEP)
Subject & Code: B23-SEC-101: Office and Spreadsheet Tools Learning

JULY

Operating System: Definition, Functions, Types of Operating System, Basics of

AUG

Popular Operating Systems, The User Interface, Exploring Computer, Icons, Taskbar, Desktop, Using Menu and Menu-Selection, Managing Files and Folders, Control Panel- Display Properties. Add/Remove Software and Hardware, Running an Application, Using help, Creating Shortcuts, Basics of O.S. Setup; Common Utilities.

SEP

Word Processing: Introduction to Word Processing, Menus, Creating, Editing &

Formatting Document, Spell Checking, Printing, Views, Tables, Word Art, Mail Merge, Macros, Inserting hyperlinks, Searching for text, Creating bookmarks, Modifying page setup, Applying document themes, Applying document style sets, Inserting headers and footers, Restricting editing, Protect a document with a password, Track changes, Manage tracked changes, Adding comments, Managing comments.

OCT

Spread Sheet: Elements of Electronics Spread Sheet, Applications, Creating and Opening of Spread Sheet, Menus, Manipulation of cells: Enter texts numbers and dates, Cell Height and Widths, Copying of Cells,

NOV

Mathematical, Statistical and Financial Function. Drawing different types of charts, Sort and Filter Data. Presentation Software: Creating, Modifying and Enhancing a presentation, Delivering a presentation, Using Sound,

DEC

Animation and Design Templates in Presentation, Working with Objects, Hyperlinks and Action Buttons, Proofing and Printing.

JAN

Revision

Government College Aharwala, Bilaspur (Yamunanagar)
Lesson Plan (Session- 2023-24)
(Odd Semester)

Name of Teacher: Dr. Satnam Singh
Department : Computer Science
Class & Semester: B.Sc. Phy. Sci & B.A. 1ST Sem.(NEP)
Subject & Code: B23-CSE-101: Problem Solving through C

JULY
Input/output: Unformatted & Formatted I/O Function,

AUG
Input Functions viz. scanf(), getch(), getche(), getchar(), gets(), output functions viz. printf(), putch(), putchar(), puts(). Operators & Expression: Arithmetic, Relational, Logical, Bitwise, Unary, Assignment,

SEP
Conditional Operators and Special Operators Operator Hierarchy & Associativity. Arithmetic Expressions, Evaluation of Arithmetic Expression, Type Casting and Conversion.

OCT
Decision making with if statement, if-else statement, nested if statement, else-if ladder, switch and break statement, goto statement, Looping: for, while, and do-while loop

NOV
Jumps in loops. Functions: definition, prototype, function call, passing arguments to a function: call by value, call by reference, recursive functions.

DEC
Arrays: Definition, types, Initialization, multidimensional arrays, Processing on Arrays.

JAN

Revision