Govt. College, Aharwala (Bilaspur) -Yamuna Nagar
Lesson Plan (2021-22) [Even Semester]

Name of Techer	**NISHA RANI**
Department	**COMPUTER SCIENCE**
Class & Section	**Bcom CAV 5TH Semester**
Subject and Code	**Social Networking and Data Analytics,BC (Voc)-605**
Semester Duration (Tentative)	**TDC-III: 1st April 2022 - 15th June 2022 (Week 1 to Week 10)** **TDC-I & II: 1st April 2022 - 15th July 2022 (Week 1 to Week 14)**

Topics - Week Wise

Week 1

Social networking: concept, evolution and applications, expansion of social networking

Week 2

using popular
social networking sites: Facebook, twitter, linked in, Instagram, blogging etc., trends in

social media
Week 3
organize, access and share information using social networks. Messaging services as social networking
Week 4
business applications of social networking: product promotion, publicity, etc., social and ethical aspects of social networking
Week 5
social networking and legislation: privacy issues, security, data protection, etc

Week 6
Big data and hadoop: concept and evolution. features of big data, managing big data
Week 7
tools and languages used for data analysis - R, Excel, SQL, Python & Tableau
Week 8
data visualization and statistical interpretation for analytics

Week 9
introduction to data warehousing and OLAP; data preparation
Week 10
predictive analysis – linear regression, classification, clustering, time series, etc
Week 11
Revision

Week 12
Revision
Week 13
Revision
Week 14
Revision

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Govt. College, Aharwala (Bilaspur) -Yamuna Nagar
Lesson Plan (2021-22) [Even Semester]

Name of Techer	**NISHA RANI**
Department	**COMPUTER SCIENCE**
Class & Section	**BCA 6TH SEMESTER**
Subject and Code	**Computer Graphics,BCA-363**
Semester Duration (Tentative)	**TDC-III: 1st April 2022 - 15th June 2022 (Week 1 to Week 10)** **TDC-I & II: 1st April 2022 - 15th July 2022 (Week 1 to Week 14)**

Topics - Week Wise

Week 1
Introduction to Computer Graphics: Interactive and Passive Graphics; Applications of Computer Graphics; Display Devices: CRT
Week 2
Random Scan, Raster Scan, Refresh Rate and Interlacing, Bit Planes, Color Depth, Color Palette, Color CRT Monitor, DVST, Flat-Panel Displays: Plasma

Panel, LED,LCD
Week 3
Lookup Table, Interactive Input Devices, Display Processor, General Purpose Graphics Software, Coordinate Representations
Week 4
Point-Plotting Techniques: Scan Conversion, Scan-Converting a Straight Line: The Symmetrical DDA, The Simple DDA, Bresenham's Line Algorithm
Week 5
Scan-Converting a Circle: Circle drawing using Polar Coordinates, Bresenham's Circle Algorithm, Scan-Converting an Ellipse

Week 6
Polynomial Method, Trigonometric Method; Polygon Area Filling: Scan-line Fill and Flood Fill Algorithms
Week 7
Two-Dimensional Graphics Transformation: Basic Transformations: Translation, Rotation, Scaling; Matrix Representations and Homogeneous Coordinates
Week 8
Other Transformations: Reflection, Shearing; Coordinate Transformations; Composite Transformations; Inverse Transformation; Affine Transformations; Raster Transformation

Week 9
Graphical Input: Pointing and Positioning Devices and Techniques.Two-Dimensional Viewing: Window and Viewport, 2-D Viewing Transformation
Week 10
Clipping: Point Clipping; Line Clipping: Cohen-Sutherland Line Clipping Algorithm, Mid-Point Subdivision Line Clipping Algorithm;
Week 11
Polygon Clipping: Sutherland-Hodgman Polygon Clipping Algorithm

Three-Dimensional Graphics: Three-Dimensional Display Methods; 3-D Transformations: Translation, Rotation, Scaling; Composite Transformations
Week 13
Revision of FIRST and SECOND UNIT
Week 14
Revision of THIRD and FOURTH UNIT

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Govt. College, Aharwala (Bilaspur) -Yamuna Nagar
Lesson Plan (2021-22) [Even Semester]

Name of Techer	**Nisha Rani**
Department	**Computer Science**
Class & Section	**BA 6TH Semester Computer Science**
Subject and Code	**Relational Data Base Management System,Paper-I**
Semester Duration (Tentative)	**TDC-III: 1st April 2022 - 15th June 2022 (Week 1 to Week 10)** **TDC-I & II: 1st April 2022 - 15th July 2022 (Week 1 to Week 14)**

Topics - Week Wise

Week 1

Relational Model Concepts, Codd's Rules for Relational Model, Hierarchical Data Model– Introduction, Features, Components, Example

Week 2

Network Data Model– Introduction, Features,
Components, Example, Differences between Hierarchical Data Model and Network

Data Model
Week 3
Comparison of Relational Data Model with Hierarchical Data Model and Network Data Model
Week 4
Relational Algebra:-Selection and Projection, Set Operation, Join and Division.
Week 5
Relational Calculus: Tuple Relational Calculus and Domain Relational Calculus

Week 6
Functional Dependencies and Normalization -- Purpose, Data Redundancy, Update Anomalies, Partial/Fully Functional Dependencies
Week 7
Transitive Functional Dependencies, Characteristics of Functional Dependencies, Decomposition
Week 8
Normal Forms (1NF, 2NF, 3NF & BCNF)

Week 9
SQL: Data Definition and data types, Create Table, Insert Data, Viewing Data, Filtering Table Data
Week 10
Sorting data, Creating Table from a Table, Destroy table, Update, View, Delete, Join
Week 11
Concatenating data from Table Specifying Constraints in SQL; Primary Key, Foreign Key, Unique Key

Week 12
Check Constraint, Using Functions,PL/SQL-Introduction, Advantages of PL/SQL
Week 13
The Generic PL/SQL Block: PL/SQL Execution Environment; PL/SQL Character Set and Data Types
Week 14
Declaration and Assignment of Variables Control Structure in PL/SQL, Conditional Control, Iterative Control, Sequential Control

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Govt. College, Aharwala (Bilaspur) -Yamuna Nagar
Lesson Plan (2021-22) [Even Semester]

Name of Techer	**NISHA RANI**
Department	**COMPUTER SCIENCE**
Class & Section	**BCA 2ND SEMESTER**
Subject and Code	**Logical Organization of Computers – II ,BCA-122**
Semester Duration (Tentative)	**TDC-III: 1st April 2022 - 15th June 2022 (Week 1 to Week 10)** **TDC-I & II: 1st April 2022 - 15th July 2022 (Week 1 to Week 14)**

Topics - Week Wise

Week 1

Sequential Logic: Characteristics, Flip-Flops, Clocked RS, D type, JK, T type

Week 2

MasterSlave flip-flops. State table, state diagram. Flip-flop excitation tables

Week 3
Sequential Circuits: Designing registers – Serial Input Serial Output (SISO), Serial Input Parallel Output (SIPO), Parallel Input Serial Output (PISO)
Week 4
Parallel Input Parallel Output (PIPO) and shift registers. Designing counters – Asynchronous and Synchronous Binary Counters
Week 5
Modulo-N Counters and Up-Down Counters

Week 6
Memory & I/O Devices: Memory Parameters, Semiconductor RAM, ROM
Week 7
Magnetic and Optical Storage devices, Flash memory
Week 8
I/O Devices and their controllers

Week 9
Instruction Design & I/O Organization: Machine instruction, Instruction set selection, Instruction cycle
Week 10
Instruction Format and Addressing Modes. I/O Interface
Week 11
Interrupt structure, Program-controlled, Interrupt-controlled

Week 12
DMA transfer, I/O Channels, IOP
Week 13
Revision of FIRST and SECOND Unit
Week 14
Revision of THIRD and FOURTH Unit

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Govt. College, Aharwala (Bilaspur) -Yamuna Nagar
Lesson Plan (2021-22) [Even Semester]

Name of Techer	**Nisha Rani**
Department	**Computer Science**
Class & Section	**BA Computer Science 6th Semester**
Subject and Code	**Computer Networks,Paper-II**
Semester Duration (Tentative)	**TDC-III: 1st April 2022 - 15th June 2022 (Week 1 to Week 10)** **TDC-I & II: 1st April 2022 - 15th July 2022 (Week 1 to Week 14)**

Topics - Week Wise

Week 1
Introduction to Data Communication and Computer Networks; Uses of Computer Networks,Types of Computer Networks and their Topologies
Week 2
Network Hardware Components: Connectors, Transceivers, Repeaters, Hubs, Network Interface Cards and PC Cards,

Bridges
Week 3
Switches, Routers, Gateways; Network Software: Network Design issues and Protocols; Connection-Oriented and Connectionless Services
Week 4
Analog and Digital Communications Concepts: Analog and Digital data and signals; Bandwidth and Data Rate, Capacity, Baud Rate
Week 5
Guided and Wireless Transmission Media; Communication Satellites; Switching and Multiplexing; Modems and modulation techniques

Week 6
Data Link Layer Design issues; Error Detection and Correction methods; Sliding Window Protocols: One-bit, Go Back N and Selective Repeat; Media Access Control
Week 7
ALOHA, Slotted ALOHA, CSMA, Collision free protocols; Introduction to LAN technologies: Ethernet, Switched Ethernet
Week 8
Fast Ethernet, Gigabit Ethernet; Token Ring; Introduction to Wireless LANs and Bluetooth,

Week 9
Routing Algorithms: Flooding, Shortest Path Routing, Distance Vector Routing; Link State
Week 10
Routing, Hierarchical Routing; Congestion Control; Traffic shaping
Week 11
Choke packets; Load shedding; Application Layer: Introduction to DNS, E-Mail and WWW services

Week 12
Network Security Issues: Security attacks; Encryption methods; Firewalls; Digital Signatures
Week 13
OSI Reference Model; TCP/IP Model
Week 14
Revision

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Govt. College, Aharwala (Bilaspur) -Yamuna Nagar
Lesson Plan (2021-22) [Even Semester]

Name of Techer	**NISHA RANI**
Department	**Computer Science**
Class & Section	**Bcom CAV 6TH Semester**
Subject and Code	**ENTERPRISE RESOURCE PLANNING,BC(Voc)-606**
Semester Duration (Tentative)	**TDC-III: 1st April 2022 - 15th June 2022 (Week 1 to Week 10)** **TDC-I & II: 1st April 2022 - 15th July 2022 (Week 1 to Week 14)**

Topics - Week Wise

Week 1
Enterprise: concept and functions; process approach to business
Week 2
types of information in business,systems approach to information management

Week 3
integrated data model, ERP: concept, origin and need
Week 4
reasons of growth of ERP,Introduction to ERP technologies
Week 5
business process reengineering

Week 6
decision support system
Week 7
executive information system
Week 8
ERP modules: finance, sales and distribution

Week 9
manufacturing, inventory management, CRM, etc
Week 10
vendours for ERP, implementing ERP solutions
Week 11
supply chain management system

Week 12
management information system
Week 13
Revision
Week 14
Revision

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