Lesson Plan 2024-25
Government College, Hansi
Unit wise Lesson Plan for Even Semester Jan-April-2025

Department: Computer Science

Name of Teacher: **Dr. Banta Singh Jangra,**   Class: **PGDCA (2ⁿᵈ Sem.)**

Subject: **Object Oriented Systems and C++**   Paper: **PGDCA-203**

Unit	Description of Chapter / Topics	Duration	Assignment / Test
Unit-1	Introduction to object oriented programming: Procedural vs Object oriented programming Characteristics of OOP; Classes& Object, Data encapsulation and Abstraction, Polymorphism, Inheritance, Dynamic Binding and message passing, OOPs Application, Structure of C++ Program ,Data types ,Variables, Operators, Enums, Type Conversion.	01-Jan-25 22-Jan-25	Assignment-1
Unit-2	Introduction to Class: Struct vs. Classes, Class Definition, Classes and Objects, Access Specifiers: Private, Public and Protected, Member functions of the class, Constructor and Destructor, Parameterized Constructor, Copy Constructors. Inheritance: Reusability, Types of Inheritance: Single inheritance, Multiple, Multilevel, Hybrid Inheritance, Public, Private, and Protected Derivations, Using derived class, Constructor and destructor in derived class, Object initialization and conversion, Nested classes (Container classes), Virtual Inheritance and Virtual base class	23-Jan-25 To 15-Feb-25	Test-1
Unit-3	Polymorphism and Exception Handling: Function Overloading, Static Class Members, Static Member Functions, Friend Functions, Operator Overloading: Unary and Binary Operator Overloading. Abstract class, Virtual function, Pure virtual function, Overloading vs. Overriding. Memory management: new, delete, object Creation at Run Time, This Pointer. Introduction to Exception handling: Try and Catch.	16-Feb-25 To 08-March-25	Assignment-2
Unit-4	Templates and Files: Introduction, Class templates and Function templates, Overloading of template function. Working with files: C++ streams, C++ stream classes, creating, opening, closing and deleting files, file pointers and their manipulators, updating file, random access to file, Error handling during file operations.	09-March-2025 To 31-March-2025	Mock Test
Revision	Revision of Syllabus and Students Query Handling with Sample Papers	01-April 2025 to Exam Date	

Lesson Plan 2024-25
Government College, Hansi
Unit wise Lesson Plan for Even Semester Jan-April-2025

Department: Computer Science

Name of Teacher: **Dr. Banta Singh Jangra**   Class: **PGDCA (2nd Sem.)**

Subject: **Computer Networks**   Paper: **PGDCA-202**

Unit	Description of Chapter / Topics	Duration	Assignment / Test
Unit-1	Introduction: Computer Communications and Networking Technologies; Uses of Computer Networks; Network Devices: Nodes, and Hosts; Types of Computer Networks and their Topologies; Network Software: Network Design issues and Protocols; Connection-Oriented and Connectionless Services; Computer Communications and Networking Models: Decentralized and Centralized Systems, Distributed Systems, Client/Server Model.	01-Jan-25 22-Jan-25	Assignment-1
Unit-2	OSI Reference Model: Physical, Data Link, Network, Transport, Session, Presentation and Application layer; Advantages and Disadvantages of OSI model; Example Networks: Internet, ATM.	23-Jan-25 To 15-Feb-25	Test-1
Unit-3	Network hardware components: Connectors, Transceivers, Network Interface Cards, Hubs, Switches, Repeater, Bridges, Routers, Gateways; Transmission media: Guided- Twisted, Coaxial, Fiber –optic cable, Unguided-Radiowaves, Microwaves, Infrared Transmission, Wired versus Wireless Networks	16-Feb-25 To 08-March-25	Assignment-2
Unit-4	Analog and Digital Communications Concepts: Representing Data as Analog Signals, Representing Data as Digital Signals, Data Rate and Bandwidth, Capacity, Baud Rate; Digital Carrier Systems; Communication Satellites; Switching and Multiplexing; Dialup Networking, Broadband Connection, Wireless Connection.	09-March-2025 To 31-March-2025	Mock Test
Revision	Revision of Syllabus and Students Query Handling with Sample Papers	01-April 2025 to Exam Date	

Lesson Plan
Government College, Hansi
Unit wise Lesson Plan for Even Semester 2024-25

Department: **Computer Science** Semester: **II**
Name of Teacher: **Anil Kumar** Class: **BCA-I**
Subject: **Object Oriented Programming using C++** Paper: **C24CAP201T**

Unit	Description of Chapter / Topics	Duration	Assignment / Test
Unit-1	Input Output in C++: Unformatted and Formatted I/O Operations. I/O using insertion and extraction operators and streams in C++. Functions: Declaration and Definition, return values, arguments, passing parameters by value, call by reference, call by pointer, Recursion, Inline Functions, Function overloading. Pointers, structures, and union in C++	16-02-25 To 28-02-25	Assignment 1
Unit-2	Object-oriented features of C++: Class and Objects, Data hiding & encapsulation, abstraction, Data Members and Member Functions, accessing class members, empty class, local class, global class, Scope Resolution Operator and its Uses, Static Data Members, Static Member Functions, Structure vs Class, Friend function and friend class. Constructors and Destructors: Constructors, Instantiation of objects, Default constructor, Parameterized constructor, Copy constructor and its use, Destructors, Dynamic initialization of objects.	01-03-25 To 08-03-25 & 16-03-25 To 25-03-25	Test 1
Unit-3	Operator Overloading: Overloading unary and binary operators: arithmetic operators, manipulation of strings using operators. Inheritance: Derived class, base class, Accessing the base class member, Inheritance: multilevel, multiple, hierarchical, hybrid; Virtual base class, Abstract class.	26-03-25 To 09-04-25	Assignment 2
Unit-4	Virtual Functions, pure virtual functions; Polymorphism & its types Exception Handling in C++: exception handling model, exception handling constructs - try, throw, catch, Order of catch blocks, catching all exceptions, Nested try blocks, handling uncaught exceptions..	10-04-25 To 25-04-25	
	Revision	26-04-25 onward	Test 2

Government College, Hansi
Unit wise Lesson Plan for Even Semester 2024-25

Department: **Computer Science**   **Semester: II**
Name of Teacher: **Anil Kumar**   Class: **PGDCA**
Subject: **Computer Organization**   Paper: **PGDCA-104**

Unit	Description of Chapter / Topics	Duration	Assignment / Test
Unit-1	Information Representation: Number Systems, Binary Arithmetic Operations, Fixed-point and Floating point representation of numbers, BCD, ASCII, EBCDIC, Grey Code.	16-02-25 To 28-02-25	Assignment 1
Unit-2	Binary Logic: Boolean Algebra, Duality Principal, Boolean Theorems, Boolean Functions Truth Tables, De Morgan''s Law, Simplification of Boolean Functions using Venn Diagram, Karnaugh Maps, Digital Logic: Logic Gates -AND, OR, NOT, Universal Gates - NAND, NOR, Others XOR, XNOR.	01-03-25 To 08-03-25 **&** 16-03-25 To 31-03-25	Test 1
Unit-3	Combinational Logic: Design Procedure, Adders, Subtractors, Encoders, Decoders, Multiplexers and De-multiplexers. Sequential Logic: Flip-flops, Registers and Counters.	01-04-25 To 15-04-25	Assignment 2
Unit-4	Basic Computer Organization: Instruction Code, Computer Registers, Computer instructions, Timing and control, Instruction Cycle. CPU organization: General Register Organization, Stack Organization, Instruction Formats, Addressing Modes.	16-04-25 To 25-04-25	
	Revision	April26-31,25 onward	Test 2

Lesson Plan
Government College, Hansi

Unit wise Lesson Plan for **2nd February to 30th April 2025**
Name of Teacher: **Dr. Kapil Kumar**
Class: **BA-IInd (IV Sem.)** Subject: Software Engineering
Paper: **BACS-221 (Theory)**

Unit	Description of Chapter / Topics	Duration	Assignment / Test
Unit-1	Introduction: Program vs. Software, Software Engineering paradigms, Software Crisis – problem and causes. Phases in Software development: Requirement, Analysis, Software Design, Coding, Testing, Maintenance. Software Development Process Models: Waterfall, Prototype, Evolutionary and Spiral models.	2nd February to 20th February	Assignment-1
Unit-2	Software Requirement Analysis and Specifications: Feasibility Study Software Requirements, Need for SRS, Characteristics of an SRS, Components of an SRS, Structure of a requirements document, validation and metrics. Problem Analysis, Data Flow Diagram, Data Dictionary, Decision table, Decision trees	20th February to 10th March	Test-1
Unit-3	Software Project Planning: Process Planning, Effort estimation, COCOMO model, Project scheduling and Staffing, team structure, Software configuration management, Quality assurance plans, Risk Management, Project monitoring plans. Software Implementation and Maintenance: Type of maintenance, Management of Maintenance, Maintenance Process, maintenance characteristics.	11th March To 25th March	Assignment-2
Unit-4	Testing : Testing fundamentals, Error, Fault, and Failure, Test Oracle, Test Case and Test Criteria, Psychology of testing, Black Box Testing, Equivalence Class Partitioning, Boundary value analysis, Cause effect graphing, White box testing , Control flow based criteria, level of testing, Unit testing, Integration testing, System testing, Validation testing, alpha, beta, and Acceptance testing.	26th March to 15th April	Test-2
Revision		16th April to Exam Date	

Lesson Plan
Government College, Hansi

Unit wise Lesson Plan for **2nd February to 30th April 2025**

Name of Teacher: **Dr. Kapil Kumar**

Class: **BA-IInd (IV Sem.)** Subject: Computer Networks

Paper: **BACS-222 (Theory)**

Unit	Description of Chapter / Topics	Duration	Assignment / Test
Unit-1	Introduction to Computer Communications and Networking Technologies, Uses of Computer Networks, Network Devices, Nodes, and Hosts, Types of Computer Networks and their Topologies, OSI Reference Model, TCP/IP Reference Model.	2nd February to 20th February	Assignment-1
Unit-2	Analog and Digital Communications Concepts: Representing Data as Analog Signals, Representing Data as Digital Signals, Data Rate and Bandwidth, Capacity, Baud Rate; Digital Carrier Systems; Guided and Wireless Transmission Media; Communication Satellites; Switching and Multiplexing.	20th February to 10th March	Test-1
Unit-3	Data Link Layer: Framing, Flow Control, Error Control, Error Detection and Correction, Sliding Window Protocols, Media Access Control, Random Access Protocols, Token Passing Protocols, Token Ring, Ethernet, gigabit Ethernet, token ring, FDDI, Bluetooth and Wi-Fi.	11th March To 25th March	Assignment-2
Unit-4	Network Layer and Routing Concepts: Virtual Circuits and Datagrams, Routing Algorithms, Flooding, Shortest Path Routing, Distance Vector Routing, Link State Routing, Hierarchical Routing, Congestion Control Algorithms, Internetworking, IPV4 and IPV6.	26th March to 15th April	Test-2
Revision		16th April to Exam Date	

Lesson Plan
Government College, Hansi

Unit wise Lesson Plan for **2nd February to 30th April 2025**

Name of Teacher: **Dr. Kapil Kumar**

Class: PGDCA- **(II Sem.)**   Subject: Software Engineering

Paper: **PGDCA-205 (Theory)**

Unit	Description of Chapter / Topics	Duration	Assignment / Test
Unit-1	Introduction: Program vs. Software, Software Engineering paradigms, Software Crisis – problem and causes. Phases in Software development: Requirement, Analysis, Software Design, Coding, Testing, Maintenance. Software Development Process Models: Waterfall, Prototype, Evolutionary and Spiral models.	2nd February to 20th February	Assignment-1
Unit-2	Software Requirement Analysis and Specifications: Feasibility Study Software Requirements, Need for SRS, Characteristics of an SRS, Components of an SRS, Structure of a requirements document, validation and metrics. Problem Analysis, Data Flow Diagram, Data Dictionary, Decision table, Decision trees	20th February to 10th March	Test-1
Unit-3	Software Project Planning: Process Planning, Effort estimation, COCOMO model, Project scheduling and Staffing, team structure, Software configuration management, Quality assurance plans, Risk Management, Project monitoring plans. Software Implementation and Maintenance: Type of maintenance, Management of Maintenance, Maintenance Process, maintenance characteristics.	11th March To 25th March	Assignment-2
Unit-4	Testing : Testing fundamentals, Error, Fault, and Failure, Test Oracle, Test Case and Test Criteria, Psychology of testing, Black Box Testing, Equivalence Class Partitioning, Boundary value analysis, Cause effect graphing, White box testing , Control flow based criteria, level of testing, Unit testing, Integration testing, System testing, Validation testing, alpha, beta, and Acceptance testing.	26th March to 15th April	Test-2
Revision		16th April to Exam Date	

Lesson Plan
Government College, Hansi

Name of Teacher: **Ms. Priyanka**   **Even Semester Jan. – April, 2025**

Class: **BCA-I (2nd Sem.)**   Subject**: Concept of OS(C24CAP203T)**

Unit	Description of Chapter / Topics	Duration	Assignment / Test
Unit-1	Introductory Concepts: Operating System, Functions and Characteristics, Historical Evolution of Operating Systems, Operating System Structure. Types of Operating System: Real-time, Multiprogramming, Multiprocessing, Batch processing. Operating System Services, Operating System Interface, Service System Calls, and System Programs. Process Management: Process Concepts, Operations on Processes, Process States, and Process Control Block. Inter Process Communication.	17th Feb. to 28th Feb, 2025	Assignment-1
Unit-2	CPU Scheduling: Scheduling Criteria, Levels of Scheduling, Scheduling Algorithms, Multiple Processor Scheduling, Algorithm Evaluation. Synchronization: Critical Section Problem, Semaphores, Classical Problem of Synchronization, Monitors. Deadlocks: Deadlock Characterization, Methods for Handling Deadlocks, Deadlock Prevention, Deadlock Avoidance, Deadlock Detection and Recovery.	3rd March. to 27th March., 2025	Test-1
Unit-3	Memory Management Strategies: Memory Management of Single-user and Multi-user Operating Systems, Partitioning, Swapping, Contiguous Memory Allocation, Paging and Segmentation; Virtual Memory Management: Demand Paging, Page Replacement Algorithms, Thrashing.	28th March to 15th April	Assignment-2
Unit-4	Implementing File System: File System Structure, File System Implantation, File Operations, Type of Files, Directory Implementation, Allocation Methods, and Free Space Management. Disk Scheduling algorithm - SSTF, Scan, C- Scan, Look, C-Look. SSD Management.	16th April to 25th April, 2025	Mock Test
Revision	Revision of Syllabus and Students Query Handling	26th April to Exam Date	

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Name of Teacher: **Ms. Priyanka**　　　　　　　**Even Semester (Jan. – April, 2025)**
Class: **BCA III (6ᵗʰ Sem)**　　　　Subject**: Information & Cyber Security (BCA-PE(L)-361)**

Unit	Description of Chapter / Topics	Duration	Assignment / Test
Unit-1	Cryptography: Overview of Information Security, Basic Concepts, Cryptosystems, Cryptanalysis, Ciphers & Cipher modes, Symmetric Key Cryptography DES, AES. Asymmetric Key Cryptography, RSA algorithm, Diffie Hellman Algorithm. Digital Signature-Digital Signatures.	1ˢᵗ Jan. to 31ˢᵗ Jan., 2025	Test-1
Unit-2	System Security: Program Security, Malicious Logic, Protection. Database Security- Access Controls, Security & Integrity Threats, Defence Mechanisms. OS Security-Protection of System Resources.	1ˢᵗ Feb. to 20ᵗʰ Feb., 2025	Assignment-1
Unit-3	Ethics in Cyber Security: Privacy, Intellectual Property in cyberspace, Professional Ethics, Freedom of Speech, Fair User and Ethical Hacking, Trademarks, Internet Fraud, Electronic Evidence, forensic Technologies, Digital Evidence collections. Tools and Methods Used in Cybercrime: Introduction, Proxy Servers and Anonymizers, Phishing, Password Cracking.	21ˢᵗ Feb. to 15ᵗʰ March	Test-2
Unit-4	Cybercrimes and Cybersecurity: Cybercrime and Legal Landscape around the world, Cyberlaws, The Indian IT Act, Challenges, Digital Signatures and Indian IT Act, Amendments to the Indian IT Act, Cybercrime and punishment, Cost of Cybercrimes and IPR Issues, Web threats for Organizations, Social Computing and associated Challenges for Organizations.	16ᵗʰ March to 5ᵗʰ April, 2025	Mock Test
Revision	Revision of Syllabus and Students Query Handling	11ᵗʰ April to Exam Date	

Name of Teacher: **Ms. Priyanka**   **Even Semester Jan. – April, 2025**
Class: **B.Sc I & B.Sc(Hons.)(2ⁿᵈ Sem)**   Subject**:** Office Tools (C24SEC103T)

Unit	Description of Chapter / Topics	Duration	Assignment / Test
Unit-1	Operating System - Definition, Functions, Types of Operating System, Basics of 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, Common utilities. Basic Word Processing - Introduction to Word Processing, Menus, Creating, Editing & Formatting Document, Spell Checking, Printing.	20ᵗʰ Feb. to 20ᵗʰ March, 2025	Test-1
Unit-2	Advanced Word Processing: Views, Tables, modifying page setup, applying document themes, applying document style sets, inserting headers and footers 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, Mathematical, Statistical and Financial function, Drawing different types of charts, Sort and Filter Data. Creating Presentation, Type of presentation views. Using sound, Animation, Working with Objects, Printing.	21ˢᵗ March. to 25ᵗʰ April, 2025	Assignment-1
Revision	Revision of Syllabus and Students Query Handling	Till Exam Date	

Name of Teacher: **Ms. Priyanka**   **Even Semester Jan. – April, 2025**

Class: **BCA I (2nd Sem)**   Subject**:** Digital Efficiency Tools (C24SEC203T)

Unit	Description of Chapter / Topics	Duration	Assignment / Test
Unit-1	Introduction to Digital Efficiency: What is Digital Efficiency? Benefits of Being Digitally Efficient, Handling Digital Distractions. Basic Time Management Tools: Using Digital Calendars (Google Calendar), Google Tasks. Email management and File organization: Basics of Digital Note-Taking (Google Keep), Simple File and Folder Organization, Managing Emails Effectively (Gmail).	21st Feb. to 29th March, 2025	Test-1
Unit-2	Digital Collaboration with G Suite: File sharing and storage (Google Drive), Online Meetings (Google Meet), Collaborative Document Editing (Google Docs, Google Sheets), Using Google Classroom for Education, Creating Surveys and Forms (Google Forms)	30th March. to 25th April, 2025	Assignment-1
Revision	Revision of Syllabus and Students Query Handling	Till Exam Date	

Lesson Plan
Government College, Hansi
Unit wise Lesson Plan for even Semester 2024-25

Department: Computer Science

Name of Teacher: Uma Sharma   Class: PGDCA

Subject: Data structure   Paper: PGDCA 201

Unit	Description of Chapter / Topics	Duration	Assignment / Test
Unit 1	**Introduction:** Data Structures Definition and its types, Data Structure operations, Static and dynamic memory storage, Algorithms complexity and time-space tradeoff, Big-O notation. **Strings:** Introduction, storing strings, String operations, Pattern matching algorithms.	1st January to 20th January 2025	Assignment-1
Unit-2	**Arrays:** one-dimensional arrays, matrices, sparse matrices, multi-dimensional arrays, operations on arrays, Linear search, Binary search, Insertion sort, selection sort, Bubble sort, Merge sort. **Linked List:** Array vs linked list, Types (singly, doubly, singly circular, header, doubly circular,), Operations on Lists – create, insert, delete, search, Applications of linked lists.	21st January to 20th feb 2025 2025	Minor Test-1
Unit-3	**Stack:** Definition, Array implementation of stacks, Linked implementation of stacks, Applications of Stacks: Infix, Postfix and prefix expression, conversions and evaluation of expressions, Recursion, Quick Sort. **Queue:** Definition, Array implementation of queues, Linked implementation of queues, Circular queues, Priority queues, Double-ended queues, Applications of queue.	21 feb to 10 march 2025	Minor Test-2
Unit-4	**Trees:** Binary Trees and their properties, Linked and static Representation of binary trees, Complete Binary Tree, Threaded Binary tree, Different tree traversal algorithms, Binary Search Tree (create, delete, search, insert, display), Heap Sort and its complexity analysis. **Graph:** Definition, Array and linked representation of graphs, Graph Traversal (BFS and DFS), Adjacency matrix and adjacency lists, path matrix, Finding Shortest Path - Warshall's Algorithm.	11th march to 10 april, 2025	Quiz
Revision	Revision of Syllabus and Students Query Handling	11th april to exam date	Presentation

Name of Teacher: Mrs. Uma Sharma
Class: **BCA-II (4thSem.)**   Subject**:RDBMS(BCA-PC(L)-242)**

Unit	Description of Chapter / Topics	Duration	Assignment / Test
Unit-1	Relational Model Concepts, Codd's Rules for Relational Model, Relational Algebra: Selection and Projection, Set Operation, Renaming, Join & Division.Relational Calculus: Tuple Relational Calculus and Domain Relational Calculus	3rd Jan.to 31stJan, 2025	Assignment-1
Unit-2	Functional Dependencies and Normalization: Purpose, Data Redundancy and Update Anomalies. Functional Dependencies: Full Dependencies and Transitive Functional Dependencies, Characteristics of Functional Dependencies. Decomposition and Normal Forms (1NF, 2NF, 3NF & BCNF)	1st Feb. to 29th Feb., 2025	Test-1
Unit-3	SQL: Data Definition and data types, Specifying Constraints in SQL, Schema Change statement, Basic Queries in SQL, Insert, Delete and Update Statements, Views.	1st March to 31st March	Assignment-2
Unit-4	PL/SQL-Introduction, Advantages of PL/SQL, The Generic PL/SQL Block: PL/SQL Execution Environment, PL/SQL Character set and Data Types, Control Structure in PL/SQL.	1st April to 25th April, 2025	Mock Test
Revision	Revision of Syllabus and Students Query Handling	26thApril to Exam Date	

Lesson Plan
Government College, Hansi
Unit wise Lesson Plan **Even Semester Jan. – April, 2025**

Name of Teacher: Mrs. Uma Sharma

Class: **B.Sc.(NM) II sem**   Subject**: Computer Science Internet and Web Design**

Unit	Description of Chapter / Topics	Duration	Assignment / Test
Unit-1	Introduction to Internet: Internet Evolution and Concept, Internet Vs Intranet, Growth of Internet, Internet Service Provider (ISP) & its Function, Connectivity- Dialup, Leased line; URL, Protocols. E-MAIL: Email Basics, Address, Features, Sending & Receiving email, Email Protocols, Labels in Email, Email services providers, Internet chatting - Voice chat, Text chat World Wide Web (www):History of WW W, Web Browser, Web server, Search Engines, working of Search Engine, Web Protocols (HTTP, FTP, SMTP etc.), TCP/IP layer with protocols.	15 Feb. to 20 march	Assignment-1
Unit-2	Web Designing: Steps for developing a Website; contents selection; Webpage, Home page; Domain Names; website publishing. HTML: Concepts of Hypertext, Versions of HTML, Elements of HTML, Syntax, Tags & Attributes, Head & Body Sections, Inserting Texts, Images, Hyperlinks, Backgrounds and Color Controls, Different HTML Tags, Table Layout and Presentation, Creating Lists, Use of Font Size & Attributes, List Types and Its Tags, Use of Frames and Forms in Web Pages.	21 march to 20 April	Test-1
Revision	Revision of Syllabus and Students Query Handling	21April to Exam Date	

Lesson Plan
Government College Hansi
Unit wise Lesson Plan Even Semester **January-May, 2024-25**

Teacher Name: **Dr. Anju Jain**

Class: **BCA (6th Sem)**   Subject: **Data Analytics Using R**

Course code: **BCA-PC(L)-363**

Unit	Description of chapter/ Topics	Duration	Assignment/ Test
Unit-1	**About R's Environment**: Basics of R and RStudio, Setting Variables, Knowing about objects in R, Attributes of objects, str() and summary() functions, R's workspace, creating sequences in R, Operators in R, Packages in R, Creating script files in R. **Vectors in R**: types of vectors, Accessing and manipulating vectors, Basic arithmetic operations on numeric vectors, finding descriptive summary like mean, median, mod, range, quartiles, standard deviation etc. of numeric vectors, comparing vectors, sorting vectors, Character vectors and operations on character vectors.	1st January to 31st January 2025	Assignment-1
Unit-2	**Factors in R**: What are factors in R? Useful operations on factors. **Arrays and Matrices in R**: Arrays in R, creating, accessing and manipulating matrices, Naming the dimensions of matrices, arithmetic operations on matrices, concatenating matrices, Replicating matrices, Various operations on matrices.	1st February to 28th February 2025	Minor Test-1
Unit-3	**Data Frames:** creating and accessing data frames, finding and assigning column and row names to data frames, binding data frames, Various operations on data frames, Lists in R. Control **Structures**: If, If-then,IF-else-if, else and switch statements, For and While loops, Break and next statements. **Functions in R**: Defining functions, Calling functions, scope of variables in functions, Returning values from functions.	1st March to 29th March 2025	Minor Test-2
Unit-4	**Input Output in R**: Reading and writing txt and CSV files in R. **Visualizing Data in R**: Creating bar chart, scatter plots, histograms, polygons, density curves, boxplots. **Building Predictive Models**: Difference between classification and regression, KNN Classification model and its implementation, Dividing data into training and test, Building a model, Predicting from the model, Evaluating the model, Interpreting Confusion Matrix, Accuracy, Precision, Recall, Sensitivity, Specificity and F-measure	1st April to 20th April 2025	Quiz
Revision	Revision of Syllabus and Students Query Handling	22nd April to Sem End Exam 2025	Presentation

Lesson Plan
Government College Hansi

Unit wise Lesson Plan Even Semester **January-May, 2024-25**

Teacher Name: **Dr. Anju Jain**

Class: **BCA (4th Sem)**   Subject: **Advanced Web Designing**

Course code: **BCA-PE(L)-241**

Unit	Description of chapter/ Topics	Duration	Assignment/ Test
Unit-1	Brief Introduction to Interactivity tools: CGI; Features of Java; Java Script; Features of ASP; VBScript; Macromedia Flash; Macromedia Dreamweaver; PHP.	1st January to 31st January 2025	Assignment-1
Unit-2	Introduction and Features of Adobe Photoshop; Microsoft FrontPage Introduction; Features; Title Bar, Menu Bar, Front Page toolbar, style, Front Face and Formatting Bar, scroll Bars.	1st February to 28th February 2025	Minor Test-1
Unit-3	Introduction to DHTML and its features; events; Cascading style Sheets, creating style Sheets; Common Tasks with CSS: Text, font, Margins, Links, Tables, colors; Marquee; Mouseovers; filters and Transitions; adding Links; Adding Tables; Adding forms; adding Image and Sound.	1st March to 29th March 2025	Minor Test-2
Unit-4	Extensible Marks-up Language (XML): Introduction, Features, XML Support and Usage, Structure of XML Documents, Structures in XML, Creating Document Type Declarations, Flow Objects, Working with Text and Font, Color and Background properties	1st April to 20th April 2025	Quiz
Revision	Revision of Syllabus and Students Query Handling	22nd April to Sem End Exam 2025	Presentation

Lesson Plan
Government College Hansi

Unit wise Lesson Plan Even Semester **January-May, 2024-25**

Teacher Name: **Dr. Anju Jain**

Class: **B. Com (2nd Sem)**   Subject: **Internet and Web Design (MDC)**

Course code: **C24MDC232T**

Unit	Description of Chapter/ Topics	Duration	Assignment /Test
Unit-1	**Introduction to Internet**: Internet Evolution and Concept, Internet Vs Intranet, Growth of Internet, Internet Service Provider (ISP) & its Function, Connectivity- Dialup, Leased line; URL, Protocols.	14th February to 28th February 2025	
Unit-1	**E-MAIL**: Email Basics, Address, Features, Sending & Receiving Email, Email Protocols, Labels in Email, Email services providers, Internet chatting - Voice chat, Text chat. **World Wide Web (www)**: History of WWW, Web Browser, Webserver, Search Engines, working of Search Engine, Web Protocols (HTTP, FTP, SNMP etc.), TCP/IP layer with protocols. **Web Designing**: Steps for developing a website; contents selection; Webpage, Home page; Domain Names; website publishing.	1st March to 29th March 2025	Assignment-1
Unit-2	**HTML**: Concepts of Hypertext, Versions of HTML, Elements of HTML, Syntax, Tags & Attributes, Head & Body Sections, Inserting Texts, Images, Hyperlinks, Backgrounds and Colour Controls, Different HTML Tags, Table Layout and Presentation, Creating Lists, Use of Font Size & Attributes, List Types and Its Tags, Use of Frames and Forms in Web Pages.	1st April to 15th April 2025	Minor Test-1
Unit-2	**Cascading Style sheets:** Introduction to CSS, External Style sheet, Internal style sheet, Inline style sheet, CSS Syntax-Selector, Property, Value, Overriding, Comments, colour, background, Font, images.	16th April to 30th April 2025	Quiz
Revision	Revision of Syllabus and Students Query Handling	1st May to Sem End Exam 2025	

Government College, Hansi
Lesson Plan for Even Semester 2024-25

Department: **Computer Science**
Name of Teacher: **Naresh Kumar**   Class: **BA-6th sem**
Subject: **Python Programming**   Paper: **BACS-322**

Unit	Description of Chapter / Topics	Duration	Assignment / Test
Unit-1	Introduction to Python:History and Features of Python Programming, Python Interpreter. Variable, identifiersand literal. Token, keywords. Data Types. Arithmetic operators, Relational operators, Logicaloperators, Bitwise operators, Assignment operators, Membership operators, Identity operators. Operator precedence. Comment, Indentation, Need for indentation Built-in Functions: input, eval, composition, print, type, round, min and max, pow. Type Conversion, Random Number Generation. Mathematical Functions. Getting help on a function, Assert Statement.	02-01-25 To 31-01-25	Assignment 1
Unit-2	Control Statements: if Conditional Statement, for and while Statements. break, continue and pass statements. Functions:Function Definitionand Call, Function Arguments-Variable Function Arguments, Default Arguments, Keyword Arguments,Arbitrary Arguments. Command Line Arguments. Global and local Variables. Accessing local variable outside the scope,Using Global and Local variables in same code, Using Global variable and Local variable with sameName.	01-02-25 To -02-25	Test 1
Unit-3	Strings:String as a compound data type. String operations-Concatenation, Repetition, Membership operation, Slicing operation. String methods-count, find, rfind, capitalize, title, lower, upper, swapcase, islower, isupperistitle, replace, isalpha, isdigit, isalnum. String Processing examples. Lists:List operations-multiplication, concatenation, length,indexing,slicing, min, max, sum, membership operator; List functions-append, extend, remove, pop, count, index, insert, sort, reverse. Recursion: Recursive solutions for problems on Numbers, String and list.	26-02-25 To 21-03-25	Assignment 2
Unit-4	Object OrientedProgramming: Introduction to Classes, Method, Class object, Instance object, Method object. Class as abstract data type, Date Class. Access attributes using functions-getattr, hasattr, setattr, delattr. Built-In Class Attributes of Class object(__dict__, __doc__ , __name__, module__). Graphics:Screen Objects- Point andline, box, polygon, circle, arc. Screen Object Methodsmove_to(),move_by(),rotate_by(),Text().Sound-Sound(),play_sound(),stop_sound().	26-03-25 To 20-04-25	
Revision		21-04-25 onward	Test 2

Government College, Hansi
Unit wise Lesson Plan for Even Semester 2024-25

Department: Computer Science
Name of Teacher: Naresh kumar   Class: BCA-IV sem
Subject: Java Programming   Code   : BCA-PC(L)-351

Unit	Description of Chapter / Topics	Duration	Assignment / Test
Unit-1	Introduction to JAVA & Principles of Object Oriented Programming: Basic Concepts of OOPs and its Benefits; Applications of OOPs; The Creation of JAVA; Importance of JAVA for the Internet; JAVA's Magic: The Byte-code; Features of Java. Data Type, Array & Strings: Data types & Operators available in JAVA; Control Structures: if, while, do while, for, switch; Break & Continue Statement; Array and Strings: Arrays, Arrays of Characters, String handling Using String Class; Operations of String Handling; String Buffer Class.	02-01-25 To 31-01-25	Assignment 1
Unit-2	Object Oriented:Object Oriented Programming in JAVA, JAVA Program Structure. Defining of a Class, Definition of Methods, Constructors, Creating Objects of a Class, Assigning Object Reference Variables, and The keyword "this", Defining and Using a Class, Automatic Garbage Collection. Extending Class and Inheritance: Using Existing Classes, Classes Inheritance, Choosing Base Class, Access Attributes, Polymorphism, Multiple Levels of Inheritance, Abstraction through Abstract Classes, Using Final Modifier, the Universal Super class-Object Class.	01-02-25 To -02-25	Test 1
Unit-3	Package & Exception Handling: Understanding Packages, Defining Package, Packaging up your Classes, Adding Classes from a Package to your Program, Understanding CLASSPATH, Standard Packages, Access Protection in Package. Exception Handling: The Idea behind Exceptions, Types of Exceptions, Dealing with Exceptions, Exception Objects, Defining your own Exception, Checked and Unchecked Exceptions.	26-02-25 To 21-03-25	Assignment 2
Unit-4	Creating Applets in JAVA: Applet basics, Applets architecture, Applets life cycle, simple Applet display methods; requesting repainting; using the status window; the html applet tag; passing parameters to applets. Multithreading Programming: The JAVA Thread Model, Understanding Threads, And The Main Thread, Creating a Thread: extending Thread and implementing Runnable Interface, Creating multiple Threads, Threads Priorities, Synchronization, Deadlocks Inter-thread Communication, Deadlocks. Input/Output in JAVA : I/O Basics, Byte and Character Structure, I/O classes, Reading Console Input, Writing to Console, Reading and Writing on Files, Random Access Files, Storing and Retrieving Objects from File, Stream Benefits.	26-03-25 To 20-04-25	
	Revision	21-04-25 onward	Test 2

Government College, Hansi
Lesson Plan for Even Semester 2024-25

Department: **Computer Science**

Name of Teacher: **Naresh Kumar**   Class: **BCA-4th sem**

Subject**:** **Computer Network**   Paper: **BCA-PC(L)-254**

Unit	Description of Chapter / Topics	Duration	Assignment / Test
Unit-1	Introduction to Computer Communications and Networking Technologies, Uses of Computer Networks, Network Devices, Nodes, and Hosts, Types of Computer Networks and their Topologies; Network Software: Network Design issues and Protocols; Connection-Oriented and Connectionless Services; Network Applications and Application Protocols; Computer Communications and Networking Models: Decentralized and Centralized Systems, Distributed Systems, Client/Server Model; Network Architecture and the OSI Reference Model, Example Network: The Internet, X., Frame relay;	02-01-25 To 31-01-25	Assignment 1
Unit-2	Analog and Digital Communications Concepts: Representing Data as Analog Signals, Representing Data as Digital Signals, Data Rate and Bandwidth, Capacity, Baud Rate; Digital Carrier Systems; Guided and Wireless Transmission Media; Communication Satellites; Switching and Multiplexing; Dial Up Networking; Analog Modem Concepts; DSL Service	01-02-25 To -02-25	Test 1
Unit-3	Data Link Layer: Framing, Flow Control, Error Control, Error Detection and Correction, Sliding Window Protocols, Media Access Control, Random Access Protocols, Token Passing Protocols, Token Ring, Introduction to LAN technologies: Ethernet, switched Ethernet, VLAN, Fast Ethernet, gigabit Ethernet, token ring, FDDI, Wireless LANs; Bluetooth;	26-02-25 To 21-03-25	Assignment 2
Unit-4	Network Hardware Components: Connectors, Transceivers, Repeaters, Hubs, Network Interface Cards and PC Cards, Bridge, Switches, Routers, Gateways; Routing Concepts: Virtual Circuits and Datagrams, Routing Algorithms, Flooding, Shortest Path Routing, Distance Vector Routing, Link State Routing, Hierarchical Routing, Congestion Control Algorithms, Internetworking;	26-03-25 To 20-04-25	
Revision		21-04-25 onward	Test 2

Government College, Hansi
Lesson Plan for Even Semester 2024-25

Department: **Computer Science**

Name of Teacher: **Naresh Kumar** Class: **BA-6th sem**

Subject**: Computer Graphics** Paper: BACS-321

Unit	Description of Chapter / Topics	Duration	Assignment / Test
Unit-1	Introduction:Historical perspective of Computer Graphics, Basic elements of Computer graphics (Modelling,Rendering, Animation), Applications of Computer Graphics. InputDevices: Keyboard, Mouse, Light Pen, Graphic Tablets,Joysticks, Trackball,Flatbed Scanner.	02-01-25 To 31-01-25	Assignment 1
Unit-2	Hard Copy Devices: Laser Printer, Flatbed Plotters. Video Display Devices:Pixel, Resolution, Aspect Ratio, Refresh Rate and Interlacing. Cathode Ray Tube,Flat Panel Display-LCD and Plasma Panel. Raster and Random scan display system.	01-02-25 To -02-25	Test 1
Unit-3	Fundamental Techniques in Graphics:Line Generation Algorithms-DDA Algorithm, Bresenham's Line Generation Algorithm.Circle Generation Algorithms-Bresenham's Algorithm and Midpoint Circle Algorithm. Polygon Filling Algorithms-Scan Line Algorithm. Viewing & Clipping-Point Clipping and Line Clipping, Cohen-Sutherland Line Clipping Algorithm. Polygon Clipping (Sutherland Hodgman Algorithm)	26-02-25 To 21-03-25	Assignment 2
Unit-4	2-Dimensional Graphics: Cartesian and Homogeneous Co-ordinateSystem, Geometric Transformations (Translation, Scaling, Rotation, Reflection). 3-Dimensional Graphics: Geometric Transformations (Translation, Scaling, Rotation, Reflection), Mathematics of Projections(Parallel & Perspective).	26-03-25 To 20-04-25	
Revision		21-04-25 onward	Test 2

Lesson Plan
Government College, Hansi
Unit wise Lesson Plan for Even Semester 2024-25

Department: Computer Science

Name of Teacher: Sat Kumar   **Class: BCA-III 6th sem**

Subject: Artificial intelligence

Unit	Description of Chapter / Topics	Duration	Assignment / Test
Unit-1	Overview of Artificial Intelligence: Introduction to AI, Importance of AI, AI and its related field, AI techniques, Problems, Problem Space and search: Defining the problem as a state space search, Production system and its characteristics, Issue in the design of search problem.	1st weekof January to last week of January	
Unit-2	Knowledge representation: Definition and importance of knowledge, Knowledge representation, various approaches used in knowledge representation, Issues in knowledge representation, Using Predicate Logic: Representing simple facts in logic.	1st week of February to 4th week of February	1st Assignment in 4th week of February
Unit-3	Heuristic Search Technique: Generate and test, hill climbing, Best first search technique, Problem Reduction, Constraint Satisfaction. Natural language processing: Introduction syntactic processing, Semantic processing, Discourse and pragmatic processing.	1st week of march to third week of march	Minor test in the last week of march
Unit-4	Learning: Introduction learning, Rote learning, learning by taking advice, Learning in problem solving, learning from example-induction, Explanation based learning. Expert system: Introduction, Representing using domain specific knowledge, Expert system shells, LISP and other AI programming languages.	4th week of march to second week of April	2nd Assignment in the 2nd week of April
Revision		3rd week of April	

Lesson Plan
Government College, Hansi
Unit wise Lesson Plan for Even Semester 2024-25

Name of Teacher: Sat Kumar   **Class: BCA-III 6th sem**

Subject: E-Commerce

Unit	Description of Chapter / Topics	Duration	Assignment / Test
Unit-1	Introduction to E-Commerce-Business operations, E-commerce practices vs. traditional business practices; concepts of b2b,b2c,c2c,b2g,g2c; Features of E-Commerce, Types of Ecommerce Systems, Elements of E-Commerce, Benefits and Limitations of E-Commerce	1st weekof January to last week of January	
Unit-2	Concepts of EDI (Electronic Data Interchange), EDI vs. Traditional methods, Benefits of EDI, Drawbacks of EDI, Components of EDI, EDI Implementation, Applications of EDI, Financial EDI, Concept of E-Governance.	1st week of February to 4th week of February	Ist Assignment in 4th week of February
Unit-3	Products in b2c model, e-brokers; Broker-based services on-line; Benefits and impact of ecommerce on travel industry; Online banking and its benefits; On-line financial services, Eauctions-implementations and benefits.	1st week of march to third week of march	Minor test in the last week of march
Unit-4	Electronic Payment System and its types, define E-money and E-wallets, Electronic fund transfer, Security Issues in E-commerce, Essential Security Requirements for safe Electronic Payments, Security Schemes.	4th week of march to second week of April	2nd Assignement in the 2nd week of April
Revision		3rd week of April	

Government College, Hansi
Unit wise Lesson Plan for Even Semester 2024-25

Department: Computer Science

Name of Teacher: Sat Kumar   **Class: BCA-III 6th sem**

Subject: Internet Technology

Unit	Description of Chapter / Topics	Duration	Assignment / Test
Unit-1	Internet and TCP/IP: Introduction to the Internet, Internet History, Internet Administration; Internet and Intranet; Internet Service; TCP/IP Model and its protocols; IP addresses: IPv4; Subnetting, IPv4 addresses; Supernetting; Next generation Internet Protocol(IPv6); The need forIPv6; Packet Format; IPv6 Addresses; Extension Headers	1st weekof January to last week of January	
Unit-2	TCP/IPs Transport and Network Layer Protocols: Role of TCP, UDP, IP and Port Numbers; Format of TCP, UDP and IP; TCP services; TCP connection management; Remote Procedure Call; SCTP; IP address resolution- Domain Name Space; DNS mapping; Recursive and Iterative resolution; Resource records; Mapping Internet Address to Physical Addresses; ARP, RARP, BOOTP, DHCP; ICMO; IGMP.	1st week of February to 4th week of February	Ist Assignment in 4th week of February
Unit-3	TCP/IPs Transport and Network Layer Protocols: Role of TCP, UDP, IP and Port Numbers; Format of TCP, UDP and IP; TCP services; TCP connection management; Remote Procedure Call; SCTP; IP address resolution- Domain Name Space; DNS mapping; Recursive and Iterative resolution; Resource records; Mapping Internet Address to Physical Addresses; ARP, RARP, BOOTP, DHCP; ICMO; IGMP.	1st week of march to third week of march	Minor test in the last week of march
Unit-4	Routing in Internet: RIP, OSPF, BGP; Internet Multicasting; Mobile IP; Private Network Interconnection: Network Address Translation(NAT), Virtual Private network(VPN); Internet Management: SNMP; Internet Security; IPSec, EMail Security; Web Security, Firewalls; Digital Signatures; Certificates.	4th week of march to second week of April	2nd Assignement in the 2nd week of April
Revision		3rd week of April	

Government College, Hansi
Unit wise Lesson Plan for Even Semester 2024-25

Department: Computer Science

Name of Teacher: Sat Kumar   **Class: B.Sc. I (H) Math**

Subject: Internet and web design

Unit	Description of Chapter / Topics	Duration	Assignment / Test
Unit-1	Introduction to Internet: Internet Evolution and Concept, Internet Vs Intranet, Growth of Internet, Internet Service Provider (ISP) & its Function, Connectivity- Dialup, Leased line; URL, Protocols. E-MAIL: Email Basics, Address, Features, Sending & Receiving email, Email Protocols, Labels in Email, Email services providers, Internet chatting - Voice chat, Text chat.	15 feb to 28 feb	
Unit-2	World Wide Web (www):History of WW W, Web Browser, Web server, Search Engines, working of Search Engine, Web Protocols (HTTP, FTP, SMTP etc.), TCP/IP layer with protocols.	1 mach to 20 march	Ist Assignment
Unit-3	Web Designing: Steps for developing a Website; contents selection; Webpage, Home page; Domain Names; website publishing.	21 march to 5 april	Minor test in the last week of march
Unit-4	HTML: Concepts of Hypertext, Versions of HTML, Elements of HTML, Syntax, Tags & Attributes, Head & Body Sections, Inserting Texts, Images, Hyperlinks, Backgrounds and Color Controls, Different HTML Tags, Table Layout and Presentation, Creating Lists, Use of Font Size & Attributes, List Types and Its Tags, Use of Frames and Forms in Web Pages.	6 april to 20 april	2nd Assignement in the 2nd week of April
Revision		21 april till exam	

Lesson Plan
Government College, Hansi
Unit wise Lesson Plan for Even Semester 2024-25
Department: Computer Science

Name of Teacher: Sushil Kumar   **Class: BCA IInd Sem**
Subject Data Structure

Unit	Description of Chapter / Topics	Duration	Assignment / Test
Unit-1	Introduction: Elementary data organization, Data Structure definition, Data type vs. Data structure, Categories of data structure, Data structure operations, Applications of data structure, Algorithms complexity and time-space trade-off, Big-O notation..	1st week of January to last week of January	
Unit-2	Strings: Introduction, Storing strings, String operations. Array: Introduction, Linear Arrays, Representation of linear array in memory, Traversal, Insertion, Deletion in an array, Multi-dimensional arrays.	1st week of February to 4th week of February	Ist Assignment in 4th week of February
Unit-3	Linked List: Introduction, Array vs. Linked List, Representation of Linked lists in memory, Traversal, Insertion, Deletion and Searching in a Linked List, Header Linked List, Circular Linked List, TwoWay Linked List, Applications of Linked Lists. Stack: Introduction, Array and Linked representation of stack, operations on stack, Applications of stack: Polish Notation, Recursion	1st week of march to third week of march	Minor test in the last week of march
Unit-4	Stack: Introduction, Array and linked representation of stacks, Operations on stacks, Applications of Stacks: Polish Notation, Recursion. Queue: Introduction, Array and linked representation of Queue, Operations on Queues, Dequeues, Priority Queues, Applications of Queues.	4th week of march to second week of April	2nd Assignment in the 2nd week of April
Revision		3rd week of April	

Lesson Plan
Government College, Hansi
Unit wise Lesson Plan for Even Semester 2024-25
Department: Computer Science
Name of Teacher: Sushil Kumar　　　　　　　　**Class: BACS IInd Sem**
Subject : Data Structure

Unit	Description of Chapter / Topics	Duration	Assignment / Test
Unit-1	**Data Structure Basics: Introduction to Complexity, Introduction to Data Structures, Classification of data structure, Abstract data type; Data Structure Operations, Applications of Data Structure. Arrays: Definition of array, Single and Multi-dimensional Arrays, Representation of single and 2- dimensional arrays and their address calculation, basic operations on single dimensional arrays, Algorithm for insertion and deletion operations; Sparse Matrices and its representation. Stacks: Definition of stack, Operations on stack, Algorithms for push and pop operations using array. Stack Applications: Prefix, Infix and Postfix expressions, Conversion of Infix expressions to Postfix expression using stack; Recursion.**	**1st weekof January to last week of January**	
Unit-2	**Queues: Introduction to Queue. Operations on Queues, Circular queue, Algorithm for insertion and deletion in simple queue and circular queue using array. De-queue, Priority Queues. Linked Lists: Introduction, Array vs Linked list; Singly, Doubly and Circular linked Lists and representation of linked lists in memory. Implementation of Stack and simple Queue as single Linked List.**	**1st week of February to 4th week of February**	**Ist Assignment in 4th week of February**
Unit-3	**Trees: Introduction to Tree as a data structure, Basic Terminology; Binary Trees, Traversal of binary trees: In order, Pre-order & post-order. Binary tree non recursive traversal algorithms. Binary Search Tree, (Creation, and Traversals of Binary Search Trees) Graphs: Introduction, Memory Representation, Graph Traversal (DFS and BFS)**	**1st week of march to third week of march**	**Minor test in the last week of march**
Unit-4	**Searching: Binary and Linear Search Sorting: Bubble sort, Insertion sort, Selection sort, Merge Sort, Quick sort. Comparison of various Searching and Sorting algorithms.**	**4th week of march to second week of April**	**2nd Assignment in the 2nd week of April**
Revision		**3rd week of April**	

Lesson Plan
Government College, Hansi
Unit wise Lesson Plan for Even Semester 2024-25

Department: Computer Science

Name of Teacher: Sushil Kumar   **Class:** BCA-II 4th Sem

Subject: COA

Unit	Description of Chapter / Topics	Duration	Assignment / Test
Unit-1	Architecture Unit: Main sub-units:Memory data register, accumulator, multiplier quotient register, adder and logic processor, shift counter, status flip-flops. Arithmetic operations – addition and subtraction, shifting, data transfer, multiplication, division, logic operations, storing. Innovations in Arithmetic Unit: Speed of addition: addition without carries, carry storage adders, carry anticipation, the carry look ahead scheme.	1st weekof January to last week of January	
Unit-2	Memory Systems: Speed imbalance between the arithmetic and memory units, advantages of memory hierarchies, memory interleaving, problems of management of memory hierarchies, operation of virtual memories. Associative memories. Cache memories – operation of the cache, comparison of cache and virtual memory system, schemes for cache organization, word or block replacement, writing into the cache, multi level caches.	1st week of February to 4th week of February	Ist Assignment in 4th week of February
Unit-3	General Organization and Control: Addressing schemes – one, two and three address schemes, no address scheme, address modification and index registers, general purpose registers, addressing modes, stack organization, use of stack for evaluation of expressions, interrupt processing, subroutine return, storing local variables, storing parameters, implementation of stacks, stack organized processors. Register Transfer Language.	1st week of march to third week of march	Minor test in the last week of march
Unit-4	I/O Units: Early I/O devices, dot-matrix printers, inkjet printers, laser printers. Information exchange between devices – serial and parallel modes of transfer, synchronous and asynchronous modes of transfer–source-initiated, destination-initiated asynchronous data transfer, handshaking. Buffered I/O, Internal buffering. DMA & transfer modes. Data Channel organization, I/O bus, external interface, device controller and internal interface, processor and memory interfaces, ways of connecting devices on a bus, PCI.	4th week of march to second week of April	2nd Assignment in the 2nd week of April

Government College, Hansi
Unit wise Lesson Plan for Even Semester 2024-25
Department: Computer Science

Name of Teacher: Pardeep Kumar   **Class: B.A I/ B.Com I (SEC)**

Subject: Office Tools

Unit	Description of Chapter / Topics	Duration	Assignment / Test
Unit-1	Operating System - Definition, Functions, Types of Operating System, Basics of 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, Common utilities.	21 Feb to 07 March	
Unit-2	Word Processing - Introduction to Word Processing, Menus, Creating, Editing & Formatting Document, Spell Checking, Printing, Views, Tables, modifying page setup, applying document themes, applying document style sets, Inserting headers and footers	08 March to 20 March	Ist Assignment
Unit-3	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, Mathematical, Statistical and Financial function, Drawing different types of charts, Sort and Filter Data. Creating Presentation, Type of presentation views. Using sound, Animation, Working with Objects, Printing..	21 March to 5 April	Minor test in the last week of march
Revision		21 April till exam	

Government College, Hansi
Unit wise Lesson Plan for Even Semester 2024-25
Department: Computer Science

Name of Teacher: Sushma Rani   **Class: B.A I (SEC)**

Subject: Office Tools

Unit	Description of Chapter / Topics	Duration	Assignment / Test
Unit-1	Operating System - Definition, Functions, Types of Operating System, Basics of 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, Common utilities.	21 Feb to 07 March	
Unit-2	Word Processing - Introduction to Word Processing, Menus, Creating, Editing & Formatting Document, Spell Checking, Printing, Views, Tables, modifying page setup, applying document themes, applying document style sets, Inserting headers and footers	08 March to 20 March	Ist Assignment
Unit-3	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, Mathematical, Statistical and Financial function, Drawing different types of charts, Sort and Filter Data. Creating Presentation, Type of presentation views. Using sound, Animation, Working with Objects, Printing..	21 March to 5 April	Minor test in the last week of march
Revision		21 April till exam	

CLASS:M.Com.-II Year (IV Sem)(2024-25) NAME OF PAPER –Rural Marketing

PAPER CODE – MCM422
Teacher name- Mr.S. Bamal

SR. NO.	MONTHS	PERIOD	TOPICS
1.	January	1st week	Features, Significance, Scope and Limitations of rural markets in India; Environmental factors affecting rural markets;
		2nd week	Changing focus of corporate towards rural markets; Demographic and psychographic profile of rural consumer;
		3rd week	Classification of products and services in Rural marketing,
		4th week	Rural demand and problems in rural marketing,
2.	February	1st week	Agriculture Marketing –Definition, Scope, Concept and Objectives; Differences in Agricultural and Consumer Marketing; Constraints in Agricultural marketing;
		2nd week	
		3rd week	Role of Agriculture in Economic Development of India; Role of Government in Agricultural Development;
		4th week	Agribusiness; Export potential for farm products - Supporting Services.
			Assignments & Test
3.	March	1st week	Cooperative Marketing –Concept, History, Functions – Reasons for slow progress of cooperative sector, Advantages & Limitations of Organized retailing in Agri Inputs and Outputs
		2nd week	
			Trends in Agri Marketing. Supply Chain Management in Agri Business
		3rd week	Cold Chains, Organized procurement & warehousing
		4th week	Assignments & Test
4.	April	1st week	Marketing Mix for rural products; Role of financial institutions in rural marketing. Rural marketing strategies
		2nd week	Different models and case studies of corporate vis Tata Kisan Seva Kendra, Commodity market functioning etc
		3rd week	Innovative distribution Channels like ITC E-Choupal, Godrej Adhar, HUL Shakti.
		4th week	Revision

CLASS:B.Com.-I Year (II Sem)(2024-25)

NAME OF PAPER- **I.F.S**   PAPER CODE **C24BCM201T**

Teacher name- Mr.S. Bamal

SR. NO.	MONTHS	PERIOD	TOPICS
1.	**January**	**3rd week**	Nature and role of financial system;
		4th week	Financial system and economic development; An overview of Indian financial system.
2.	**February**	**1st week**	Financial markets and financial instruments: money and capital markets: Money market
		2nd week	meaning, constituents instruments and functions, recent developments in Indian money market;
		3rd week	Capital market: primary and secondary market; Depository system, recent developments in Indian capital market; SEBI: its formation, role and recent developments.
		4th week	Assignments & Test
3.	**March**	**1st week**	Meaning, features, participants, instruments; private, PSUs & Government securities market.
		2nd week	Financial institutions: Reserve Bank of India: organization, management and functions;
		3rd week	credit creation and credit control.
		4th week	Assignments & Test
4.	**April**	**1st week**	Meaning and functions, structure and recent developments in commercial banking in India;
		2nd week	E-banking, NPA's in Commercial Banks, Payment Banks. Development banks: concept, objectives and functions; recent developments in development banking.
		3rd week	Revision
		4th week	Revision

CLASS:B.Com.-II Year (IV Sem)(2024-25) NAME OF
PAPER –C. Law
PAPER CODE – B.Com 404
        Teacher name- Mr.S. Bamal

SR. NO.	MONTHS	PERIOD	TOPICS
1.	January	1st week	Meaning and nature of company ,
		2nd week	Article of Association
		3rd week	Memorandum of association
		4th week	Doctrine of Indoor management
2.	February	1st week	Meaning and definition prospectus
		2nd week	Membership of company
		3rd week	Meetings , Voting
		4th week	Assignments & Test
3.	March	1st week	Meaning and qualification appointment of director
		2nd week	Liabilities of directors and their remuneration
		3rd week	Board of director
		4th week	Assignments
4.	April	1st week	Amalgamations
		2nd week	Winding up of company
		3rd week	Duties and power of liquidator
		4th week	Revision

Govt. College Hansi
Lesson plan.
Unit wise lesson plan for the Even Semester, 2024-25.

Teacher: Surender Kumar   Class: B.com 2nd Sem   Subject: Advanced Accounting   Paper C24BCM202T

Unit	Description of chapters/topics	Duration	Assignment/ Test
Unit 1	Partnership accounts: Meaning, nature and partnership deed. Capital Account, fixed capital account and fluctuating capital account, profit and loss appropriation account, interest on capital and drawing, change in profit sharing ratio	3rd & 4th week of February	1st assignment in the last week of February
Unit 2	Reconstitution of partnership firm, admission of a partner, sacrifice ratio, goodwill and method of valuation of goodwill, retirement and death of a partner, calculation of gaining ratio, revaluation account, dissolution of partnership and partnership firm. Insolvency of partner, gradual realization and piecemeal distribution (Including Garner vs Murray Rule).	1st & 2nd week of March	Minor test in the 1st week of March
Unit 3	Hire purchase system, meaning feature and accounting treatment, calculation of interest, leasing vs hire purchase. Instalment Payment system, accounting treatment of instalment payment system.	3rd & 4th week of March	2nd assignment in the 4th week of March
Unit 4	Consignment Account- meaning feature and importance of consignment. Preparation of accounts of consignment. Valuation of loss and stock.	1st week of April to 15th April	2nd test in 2nd week of April
Revisin	Revision, presentation, problem solving	Last week of April	…….

Unit-1	AJMER SINGH [COMMERC] B.COM 4TH SEM ENTREPRNEURSHIP DEVELOPMENT ED- MEANING, NATURE, SCOPE, ENTREPREUNIER QUALITIES, ROLE OF ED IN ECONOMIC DEVELOPMENT.WOMEN AND RURAL ENT.SHIP	01-31 JAN. 2025	
UNIT-2 AND 3	FACTORS AFFECTING ENT.SHIP, ENT GROWTH, MOTIVATION, COMPETENCIES, ROLE , RELEVANCE OF EDP, ROLE OF GOVT. IN EDP. MSE, OPPORTUNITY,IDENTIFICATION AND SELECTION, BUSINESS PLAN, PROJECT APPRAISAL.	01 -28 FEB 2025 01-31 MARCH 2025	
UNIT -4	FINANCING OF ENTERPRISES, INSTITUTIONAL FINANCE AND SUPPORTS, GOVT. POLICIES FOR SMALL ENTERPRISES TEST -01 AND TEST- 02 ASSIGNMENTS AND VIVA	01-30 APRIL 2025	

Govt. College Hansi
Lesson plan.
Unit wise lesson plan for the Even Semester, 2024-25.

Teacher: Surender Kumar **Class: B.com 6th Sem**

Subject: Financial services **Paper BCOM 602**

Unit	Description of chapters/topics	Duration	Assignment/ Test
Unit 1	Financial services: Concept and nature, Indian Financial system- Structure and functions; An overview of Financial market in India; money market and capital market- instruments, participants and segments.	3rd & 4th week of February	1st assignment in the last week of February
Unit 2	Merchant banking: Meaning, functions and regulatory framework; Mutual funds; Insurance ; Micro finance institutions	1st & 2nd week of March	Minor test in the 1st week of March
Unit 3	Fund based Financial services: Leasing and hire purchase, consumer and housing finance ; Venture capital finance; Factoring services, securitization	3rd & 4th week of March	2nd assignment in the 4th week of March
Unit 4	Fee based Financial services: Stock broking, custodial services, portfolio management services, wealth management services ,credit rating	1st week of April to 15th April	2nd test in 2nd week of April
Revisin	Revision, presentation, problem solving	Last week of April	…….

Govt. College Hansi
Lesson plan.
Unit wise lesson plan for the Even Semester, 2024-25.

Teacher: Surender Kumar   **Class: M.Com 2nd Sem**   **Subject: International Business**   **Paper**

Unit	Description of chapters/topics	Duration	Assignment/ Test
Unit 1	International business: importance, nature and scope. Management of international business operations-complexities and issues. IT and international business. India involvement in international business. Factors affecting international business: social and cultural, economic, political, legal and technological advancement. Globalization-features and components, advantages and disadvantages	3rd & 4th week of February	1st assignment in the last week of February
Unit 2	Theories of international trade: classical and modern theory of international trade, modes of entry into international business: exporting, licensing, franchising, contract manufacturing, turnkey project, foreign direct investment and joint venture.	1st & 2nd week of March	Minor test in the 1st week of March
Unit 3	Multinational (MNC) in international business: issues in investment, technology transfer, pricing and regulations, international collaboration and strategic alliances. Trade barrier- tariff and non-tariff barriers, optimal tariff, balance of payment. Exchange rate determination.	3rd & 4th week of March	2nd assignment in the 4th week of March
Unit 4	International economic institutions: WTO, world bank, IMF, WTO and India, regional economic integration, theory of custom union, partial and general equilibriam analysis, emerging markets-BRICKS and ASEAN.	1st week of April to 15th April	2nd test in 2nd week of April
Revisin	Revision, presentation, problem solving	Last week of April	…….

CLASS:B.Com.-II Year (II Sem)(2024-25)
NAME OF PAPER –Business Communication Skills
PAPER CODE – C24SEC202T
 Teacher name- Mr.Vijay Kaliraman

SR. NO.	MONTHS	PERIOD	TOPICS
1.	January	3rd week	Business Communication – Nature and process, forms of communication role of communication skills in business,
		4th week	Communication networks, barriers to communication. Communication Skills: Listening skills – cognitive process of listening,
2.	February	1st week	barriers to listening, speaking skills,
		2nd week	public speaking, body language and para language
		3rd week	Written Communication –structures and layout of business letters;
		4th week	Assignments & Test
3.	March	1st week	types of letters: sales letters, order and supply letters, claim letters, employment letters
		2nd week	Listening Skills
		3rd week	Business Reports – Purpose and types, framework of business reports,
		4th week	Assignments & Test
4.	April	1st week	Presentation of reports. Meetings: issuing notice,
		2nd week	Agenda of meeting and recording of minutes of meetings.
		3rd week	Employment Application
		4th week	Revision

CLASS:B.Com.-II Year (II Sem)(2024-25)
NAME OF PAPER Basics of Digital Marketing
PAPER CODE – C24MIC203T
Teacher name- Mr.Vijay Kaliraman

SR. NO.	MONTHS	PERIOD	TOPICS
1.	January	3rd week	Meaning and characteristic of Digital Marketing
		4th week	Difference between traditional marketing and digital marketing
2.	February	1st week	Digital tools
		2nd week	Website hosting and types
		3rd week	SWOT analysis of business for digital Marketing
		4th week	Assignments & Test
3.	March	1st week	Introduction to S.E.O
		2nd week	On Page and off Page search engine optimization.
		3rd week	S.E.M
		4th week	Assignments & Test
4.	April	1st week	Ethical and legal issues in the field of digital marketing
		2nd week	
		3rd week	Revision
		4th week	Revision

CLASS:M.Com.-II Year (IV Sem)(2024-25)

NAME OF PAPER – Performance Mgt.

PAPER CODE – MCH- 431

Teacher name- Mr.Vijay Kaliraman

SR. NO.	MONTHS	PERIOD	TOPICS
1.	January	1st week	Foundations of Performance Management: Concept, Objectives, Significance of Performance Management
		2nd week	Performance Management Process, Performance Management and Strategic Planning,
		3rd week	Performance Management and Performance Appraisal.
		4th week	Implementation of Performance Management System: Defining Performance and Choosing Measuring Approach
2.	February	1st week	,Models for assessing performance: balanced Scorecard, EFQM Model; Outcome Metrics: Economic Value added (EVA)
		2nd week	Other economic measures; Measuring Results and Behavior
		3rd week	Common Problems in Employee Assessment,
		4th week	Assignments & Test
3.	March	1st week	Gathering Performance Information Implementing a Performance Management System &Test
		2nd week	Performance Management and Employee Development: Personal Developmental Plans, 360 Degree Feedback Systems,
		3rd week	Performance Management Skills, Contribution of Human Resource Management Practices to Employee Performance.
		4th week	Assignments
4.	April	1st week	Reward Systems and Legal Issues: Traditional and Pay for Performance plans; Impact of leadership on organizational performance
		2nd week	Managing team performance, ethics in performance Management; Performance management practices in Indian organizations.
		3rd week	
		4th week	Revision
			Revision

CLASS:B.Com.-III Year (6th Sem)(2024-25)

 NAME OF PAPER –**Investment Mgt**

PAPER CODE – BCOM 606 (ii)

 Teacher name- Mr.Vijay Kaliraman

SR. NO.	MONTHS	PERIOD	TOPICS
1.	January	1st week	Meaning and nature of investment Mgt
		2nd week	Speculation vs Investment , concept of risk and return
		3rd week	Calculation , tradeoff between risk and return
		4th week	Savings scheme , Insurance
2.	February	1st week	Mutual Funds and real estate investment
		2nd week	Others investment avenues
		3rd week	Capital market and money market
		4th week	Assignments & Test
3.	March	1st week	New issue market , secondary market
		2nd week	SEBI and its regulations
		3rd week	Fundamental analysis and industry analysis
		4th week	Assignments & Test
4.	April	1st week	Economy analysis
		2nd week	Company analysis
		3rd week	Revision
		4th week	Revision

Teacher: Vijay Kumar Yadav   **Class : B. Com 2nd**
Subject: Business Statistics-II (BCOM 402)   **Section: ---**

Unit No.	Description of Chapters/ Topic	Expected Duration	Assignment/Test
Unit 1	**Probability: Concept and evolution, Terminology, Concept, Mathematical and statistical probability, addition and multiplication theorem and mathematical expectations, Rule for the inverse probability.**	1st week of Jan 2025 to 3rd week of Jan 2025	....
Unit 2	**Theoretical distributions: Probability function and constants of binomial distribution, constants and utility of Poisson distribution, Properties of normal distribution, Relation between normal and Poisson distribution.**	4th week of Jan 2025 to 3rd week of Feb 2025	1st minor test in the 1st week Feb 2025. 1st assignment in the 2nd week Feb 2025.
Unit 3	**Index numbers: uses, types of index numbers, problems in the construction of index numbers, Methods of constructing price and quantity index by different methods-simple and weighted, Tests of consistency-unit test, time and factor reversal test**	4th week of Feb 2025 to 2nd week of Mar 2025	2nd minor test in the 1st week Mar 2025.
Unit 4	**Times Series: Components and models of time series, measurement of trend by different methods-graphic method, least squares method, analysis of time series.**	3rd week of Mar 2025 to 1st week of Apr 2025	2nd assignment in the 3rd week Feb 2025. Viva-voice in the 1st week Apr 2025. **(Revision from 2nd week of Apr 2025 till Exams)**

VIJAY KUMAR YADAV
(Asst. Professor of Commerce)

Unit wise lesson plan for the Even Semester 2024-25

Teacher: Vijay Kumar Yadav   **Class : B. Com 2nd**

Subject: Cost Accounting (BCOM 401)   **Section: ---**

Unit No.	Description of Chapters/ Topic	Expected Duration	Assignment/Test
Unit 1	**Cost Accounting: Meaning, objectives and functions, distinction between cost accounting and financial accounting, Cost concept and classification, Installation of a costing system, preparation of cost sheet.**	1st week of Jan 2025 to 3rd week of Jan 2025	…….
Unit 2	**Accounting for material and labour: Material control, Pricing of material issues, treatment of material losses, Accounting and control of labour cost, treatment of over time, idle time and fringe benefits, Incentive Schemes.**	4th week of Jan 2025 to 3rd week of Feb 2025	1st minor test in the 1st week Feb 2025. 1st assignment in the 2nd week Feb 2025.
Unit 3	**Job costing, batch costing and contract costing, Process costing.**	4th week of Feb 2025 to 2nd week of Mar 2025	2nd minor test in the 1st week Mar 2025.
Unit 4	**Standard costing and variance analysis (material, labour and overhead), Responsibility and reporting.**	3rd week of Mar 2025 to 1st week of Apr 2025	2nd assignment in the 3rd week Feb 2025. Viva-voice in the 1st week Apr 2025. **(Revision from 2nd week of Apr 2025 till Exams)**

VIJAY KUMAR YADAV

(Asst. Professor of Commerce)

Unit wise lesson plan for the Even Semester 2024-25

Teacher: Vijay Kumar Yadav   Class : M. Com 1st

Subject: Management and Cost Accounting (MC-205)   Section: ---

Unit No.	Description of Chapters/ Topic	Expected Duration	Assignment/Test
Unit 1	Management Accounting: Nature, functions, objectives and scope; Financial Accounting vs. cost accounting vs. Management accounting, Role and Responsibilities of Management Accountant in a Business organisation. Cost Accounting: Meaning, Cost concepts and classifications.	1st week of Jan 2025 to 3rd week of Jan 2025	…….
Unit 2	Budgetary control: Definition, installation of the system; Classification of Budgets; Behavioural aspects of budgeting, Standard costing and Variance analysis: Concept: Setting of standards: Analysis of different types of material, Labour, Overhead and Sales variance.	4th week of Jan 2025 to 3rd week of Feb 2025	1st minor test and 1st Quiz in the 1st week Feb 2025. 1st assignment in the 2nd week Feb 2025.
Unit 3	Marginal costing and Break even Analysis: Cost- Volume- Profit Analysis; Different types of break-even points and Charts; Application of Marginal Costing to Managerial Decision making.	4th week of Feb 2025 to 2nd week of Mar 2025	2nd minor test and 1st Quiz in the 1st week Mar 2025.
Unit 4	Responsibility Accounting: Concept and Significance; Organisational structure and Decentralisation; Cost and benefits of Decentralisation; Responsibility Centres: Cost centre, Revenue centre, Profit centre and Investment centre; Transfer pricing: Alternate transfer pricing methods; Divisional performance measurement: Return on Investment, Residual Income; Economic value added and return on sales; Non-financial performance measures; Balanced scorecard.	3rd week of Mar 2025 to 1st week of Apr 2025	2nd assignment in the 3rd week Feb 2025. Viva-voice in the 1st week Apr 2025. **(Revision from 2nd week of Apr 2025 till Exams)**

VIJAY KUMAR YADAV
(Asst. Professor of Commerce)

Government College, Hansi …..Unit wise Lesson Plan for the Even Semester,2024-25

Name of the Teacher:- Mr. SHIV RATTAN MITTAL   **Subject**- Retail Management

Class- M.Com 4th Sem**.**   **Paper – MCM- 421**

Unit	Description of Chapters/Topics	Duration	Assignment/Test
Unit 1	**Introduction to Retail** – Evolution of Retail, Organized vs Unorganized retailing, Retailing Mix, Theories of retail development, Types of Retailers; Careers in Retailing; Understanding Consumers.	1st Jan. – 31st Jan., 2025	1st Assignment in the 2nd Week of January
Unit 2	**Retail Locations** – Planned & Unplanned, Retail Site Location – Site Characteristics, Trade Area Characteristics, Location & site evaluation; Store Layout & Design; Space Mgt.; Visual Merchandising; Atmospherics.	1st Feb. – 28th Feb., 2025	1st Minor Test in the 2nd Week of February
Unit 3	**Managing Merchandise –** Merchandise Planning, Process, Forecasting Sales, Developing Assortment Plans, National Brands & Private Labels; **Retail Pricing** – Setting Retail Prices, Price Adjustments, Pricing Strategies; Retail Communication Mix.	1st March – 31st March, 2025	2nd Minor Test in the 3rd Week of March
Unit 4	Information & Supply Chain Mgt. – Information flows, Logistics, Distribution Centre. Contemporary issues in retail- significance of retail as an industry, Retail scenario at International & National Level, Technology in Retailing, Multi-channel Retailing, E-Retailing: Future of e-retailing, Challenges for traditional retail & e-retail, FDI in Retail.	1st April – 20th April, 2025	2nd Assignment in the 1st Week of April
Revision	**Revision, Problem Solving & Quizzes, Presentations.**	21st April Onwards	…………

Unit wise Lesson Plan for Even Semester

2024-25

Department:- Commerce

Name of the Teacher:- Mr. SHIV RATTAN   **Class:-** B.Com 4th Sem.

 Subject-   Auditing   **Paper**- BCOM - 403

Unit	Description of Chapters/Topics	Duration	Assignment/Test
Unit 1	**Introduction:** Meaning, objectives & advantages of auditing; Types of audit: internal & external audit, propriety & efficiency audit. **Audit Process:** Audit programme; audit working papers & evidences; audit of e-commerce transactions. **Methods of Audit Work:** Routine checking & test checking.	1st Jan. – 31st Jan., 2025	1st Assignment in the 2nd Week of January
Unit 2	Internal control & internal checking system. **Vouching:** Meaning, objectives & importance of vouching, vouching of cash books, sale book, bill receivable book, journal proper & debtor & creditor ledgers, verification of assets & liabilities.	1st Feb. – 28th Feb., 2025	1st Minor Test in the 2nd Week of February
Unit 3	**Audit of Limited Companies:** Company auditor-appointment, powers, duties & liabilities, Directions of comptroller & Auditor General of India. Audit Report.	1st March – 31st March, 2025	2nd Minor Test in the 3rd Week of March
Unit 4	**Investigation:** Meaning, nature, procedure & objectives, investigation & Due Diligence. Professional Ethics of auditing.	1st April – 20th April, 2025	2nd Assignment in the 1st Week of April
Revision	Revision, Problem Solving & Quizzes	21st April Onwards	……

Unit wise Lesson Plan for Even Semester

2024-25

Department:- Commerce

Name of the Teacher:- Mr. SHIV RATTAN   **Class:-** M.Com 2nd Sem.

 Subject- Financial Mgt.   **Paper**- MCOM - 202

Unit	Description of Chapters/Topics	Duration	Assignment/Test
Unit 1	**Financial Mgt. :** Goals, Functions & Decisions, Time Value of Money. **Capital Budgeting Decisions :** Introduction, Nature & Types of Investment Decisions & Methods.	1st Jan. - 31st Jan., 2025	1st Assignment in the 2nd Week of January
Unit 2	**Capital Structure :** Theories & its Determinants, Cost of Capital, Sources of Finance.	1st Feb. – 28th Feb., 2025	1st Minor Test in the 2nd Week of February
Unit 3	**Mgt. of Working Capital:** Meaning, Determinants, **Cash Mgt., Receivable Mgt., Inventory Mgt.**	1st March – 31st March, 2025	2nd Minor Test in the 3rd Week of March
Unit 4	**Dividend Policy Models.**	1st April – 20th April, 2025	2nd Assignment in the 1st Week of April
Revision	**Revision, Problem Solving & Quizzes, Presentations.**	21st April Onwards	……

CLASS:B.Com.-III Year (VI Sem)(2024-25)

NAME OF PAPER –Income Tax-II

PAPER CODE – BCOM 604

Teacher name- Dr. Sushila

SR. NO.	MONTHS	PERIOD	TOPICS
1.	January	1st week	Computation of Total Income of Individuals
		2nd week	Computation of Total Income of Individuals
		3rd week	Computation of Total Income of Individuals
		4th week	Rebate and Reliefs of Income Tax
2.	February	1st week	Computation of Total Income of H.U.F
		2nd week	Computation of Total Income of Partnership Firms
		3rd week	Computation of Total Income of Association of Persons.
		4th week	Computation of Total Income of Body of Individuals
3.	March	1st week	Income tax Authorities
		2nd week	Preparation of filling of Tax returns. Assessment Procedure
		3rd week	Deduction and collection of tax at source Advance Payment of Tax
		4th week	Recovery and refund of Tax
4.	April	1st week	Dispute Resolution Committee
		2nd week	Appeals and Revisions Penalties Offences liable to prosecution
		3rd week	Revision
		4th week	Revision

Unit wise Lesson Plan for Even Semester 2024-2025

Department: Commerce

Name of Teacher: **Dr.Sushila**   Class: **M.Com IV Sem**

Subject: MCH-436 GLOBAL HUMAN RESOURCE MANAGEMENT

Unit	Description of Chapter / Topics	Duration	Assignment / Test
Unit-1	Human and Cultural Variables in Global Organizations: Culture and values, Cross Cultural Differences and Managerial Implications	January	
Unit-2	Cultures in Organizations and Hofstede's Study — Cultural dimensions and their HR and managerial implications	February	Test
Unit-3	Evolution of Global Organizations: Cross Cultural Leadership, Motivation and Decision Making, Cross Cultural Communication and Negotiation.	March	Assignment
Unit-4	Human Resource Management in Global Organizations: Selection, Source criteria for International Assignment, Compensation and Appraisal System.	April	Test
Revision	Till Exam time		

Unit wise Lesson Plan for Even Semester 2024-2025

Department: Commerce

Name of Teacher: **Dr.Sushila**   Class: **BCOM IV sem**

Subject: **406 RETAIL MANAGEMENT**

Unit	Description of Chapter / Topics	Duration	Assignment / Test
Unit-1	Retailing **:** Concept, importance, functions, organized vs. unorganized retail, key drivers of growth of retailing in India. Understanding retail customer	January	
Unit-2	Theories of retailing. Retail formats: Store and Non- store formats. Retail Locations: Planned and Unplanned, Retail Site Characteristics, and Site Evaluation. Store Layout and Design.	February	Test
Unit-3	Merchandise planning and process. Forecasting sales. Retail mix: Developing Assortment Plans, National Brands and Private Labels; Retail Pricing- Setting Retail Prices, Price Adjustments, Pricing Strategies.	March	Assignment
Unit-4	Retail Communication Mix. Logistics in retail. Human Resource Management in Retailing – Manpower planning, recruitment, training, and compensation. Use of Information Technology in retailing.	April	Test
Revision	Till Exam time		

MR. AJMER SINGH , GOVT. COLLEGE HANSI
LESSON PLAN—MARKETING MANAGEMENT (M.com P)

SR. NO	PARTICULARS / TOPICS	DURATION	RMARKS
UNIT 1.	NATURE, SCOPE AND CONCEPTS O MARKETING, CORPORATE ORIENTATION TOWARDS THE MARKETPLACE, MARKETING MIX, UNDERSTANDING 4A, MKT ENVIRONMENT AND SCANNING. MIS AND MKT RESEARCH, UNDERSTANDING INDUSTRIAL AND CONSUMERS MARKET, SEGMENTATION AND TARGETING , POSITIONING. ASSIGNMENT -1	JANUARY 2025	
UNIT 2.	PRODUCT DECISIONS, PRODUCT CONCEPTS AND CLASSIICATIONS, PRODUCT MIX, PLC, NEW PRODUCT DEVELOPMENT, BRANADING , PACKAGING , LABELING, PRICING – FACTORS,SETTING,STRATEGIS AND METHODS . ASSIGNMENT -2	FEBRUARY 2025	
UNIT 3.	DISTRIBUTION CHANNELS—LOGISTIC MGT; NATURE, TYPES, ROLE OF INTERMIDIARIES, FACTORS AFFECTING CHANNEL DECISION, INTENSITY OF MKT COVERAGE, CHANNEL BEHAVIOUR AND ORG. , CONLICT MGT, LOGISTIC MGT—OBJECTIVES AND MOJOR DECISION AREAS OF LOGISTICS. PROMOTION AND COMMUNICATION DECISION, ELEMENTS OF PROMOTION MIX, ADVT, SALES PROMOTION, PERSONAL SELLING AND PUBLIC RELATION. TEST-1 AND 2	MARCH 2025	
UNIT 4.	HOLISTIC MARKETING-TRENDS IN MARKETING PRACTICES, INTERNAL MARKETING, SOCIALLY RSPONSIBLE MARKETING, IMPLEMENTATION AND CONTROL, NEW ISSUES IN MARKTING, GLOBALIZATION, CONSUMERISM, GREEN MARKETING, DIRECT,NETWORK, EVENT MARKETING, ETHICS IN MARKETING. PRESENTATION VIVA GROUP DISCUSSION	APRIL 2025	

Unit wise lesson plan for 2024-25 (Even Semester)

Teacher: **Shiv Kumar** Class: **UG 1ˢᵗ (MDC)**

Subject: **Basics of Digital Marketing (Practical)** Group: **A, B, C, D**

#	Description of Chapters/Topics	Expected Duration	Assignment/Test
1	**Website/Blog/Portal Creation and Optimization: 7Marks** • **Task:** Create a basic Word Press blog or website. Optimize it using on-page SEO techniques. • **Evaluation Criteria:** o Setup and Structure (2 Marks) o On-page SEO (Meta tags, URL structure, etc.) (3 Marks) o Content Quality (2 Marks)	3ʳᵈ week of February to 4ᵗʰ week of February	-------
2	**Search Engine Marketing (SEM) Campaign Creation: 7Marks** • **Task:** Design a search campaign using Google Ads. Include keyword selection, ad copy, and budget allocation. • **Evaluation Criteria:** o Keyword Research and Selection (2 Marks) o Ad Copy and Creativity (3 Marks) o Budget Allocation and Strategy (2 Marks)	1ˢᵗ week of March to 3ʳᵈ week of March	-------
3	**Social Media Optimization (SMO) & Marketing; Total Marks:** 6 • **Task:** Create and optimize a social media marketing campaign for one platform (e.g., Facebook, Instagram, and Twitter). • **Evaluation Criteria:** o Profile Setup and Optimization (2 Marks) o Content Strategy and Posting Plan (2 Marks) o Use of Analytical Tools (2 Marks)	1ˢᵗ week of April to 2ⁿᵈ week of April	-------
4	**Report Generation and Analysis: 5Marks** • **Task:** Prepare a report analyzing the performance of either the SEM or SMO campaign. o **Evaluation Criteria:** Data Collection and Analysis (2 Marks) o Presentation of Findings (1 Mark) o Suggestions for Improvement (2 Marks)	3ʳᵈ week of April to 4ᵗʰ week of April	-------

SHIV KUMAR
(Asst. Professor of Commerce)

Unit wise lesson plan for 2024-25 (Even Semester)

Teacher: **Shiv Kumar**   Class: **UG 1ˢᵗ (MDC)**
Subject: **Basics of Digital Marketing (Theory)**   Section: **A & B**

#	Description of Chapters/Topics	Expected Duration	Assignment/Test
1	**Introduction of Digital Marketing**: Meaning & Characteristics. Difference between Digital and Traditional Marketing. Scope of Digital Marketing. Tools used for Digital Marketing Domain names and types. Website hosting and types. SWOT Analysis of Business for Digital Marketing**.**	3ʳᵈ week of February to 1ˢᵗ week of March	1ˢᵗ assignment in the beginning of 3ʳᵈ week of March
2	**Search Engine Optimization (SEO)**: Introduction to SEO; understanding search engines; basics of keyword research; On-page and off-page Search Engine Optimization. Basics of Search Engine Marketing (SEM). Ethical and Legal Issues in the field of digital marketing.	3ʳᵈ week of March to 3ʳᵈ week of April	Minor test in the first week of April

SHIV KUMAR
(Asst. Professor of Commerce)

Unit wise lesson plan for 2024-25 (Even Semester)

Teacher: **Shiv Kumar**   Class: **B. Com 3rd**

Subject: **Goods and Services Tax**   Section: **-**

#	Description of Chapters/Topics	Expected Duration	Assignment/Test
1	GST: meaning, taxable person, registration: Procedure and documents required	3rd week of January to 4th week of January	…….
2	Levy and collection of GST, Time and Place of Supply of GST, Value of Taxable Supplies	1st week of February to 3rd week of February	…….
3	Computation and Transfer of ITC, Tax invoice Credit and debit note	4th week of February to 1st week of March	1st assignment in the beginning of 3rd week of February
4	Various returns to be filed under GST, Payment of tax including TDS	3rd week of March to 4th week of March	Minor test in the first week of March
5	Interest Provisions on delayed Payments, Offences and Penalties	1st week of April to 3rd week of April	2nd assignment in the last week of March

SHIV KUMAR
(Asst. Professor of Commerce)

Unit wise lesson plan for the Even Semester, 2024-2025
Teacher: Babita Chaudhary   Class: BA 1st

Section: A& B   Subject: Indian politics

Unit	Description of chapters/topics	Duration	Assignment/Test
Unit 1	Theory and Practice of Government: Legislature, Executive and Judiciary; Separation of Powers and Rule of Law	3rd week of Feb to 2nd week of March	1st assignment in the beginning of 1st week of Feb
Unit 2	Forms of Government: Unitary and Federal; Parliamentary and Presidential	3rd week of March to 2nd week of April	Minor test in the 2nd week of April
Unit 3	Operational Dynamics of Political System: Political Parties, Pressure Groups, Representation and Bureaucracy	3rd week of April to 1st week of May	2nd assignment in the 4th week of April
Unit 4	Political Regimes Democracy Totalitarianism, Military Rule and Monarchy	2nd week of May to 4th week of May	2nd test in 3rd week of May

Unit wise lesson plan for the Even Semester, 2024-2025
Teacher: Babita Chaudhary   Class: BA 2nd

Section: A & B
Subject: Indian political thinkers

Unit	Description of chapters/topics	Duration	Assignment/Test
Unit 1	**J.P. Narayan and Ram Manohar lohiya**	1st week of January to last week of January	1st assignment in the beginning of last week of January
Unit 2	Mahatma gandhi and M.N. Roy	1st week of Feb to last week of Feb.	Minor test in the 2nd week of Feb.
Unit 3	Jawahar Lal Nehru and B.R Ambedkar	1st week of March to last week of March	2nd assignment in the 2nd week of March
Unit 4	Subhash Chandra Bose and Bhagat Singh	1st week of April to 15th April	2nd test in 2nd week of April
Revision	Revision, presentation, problem solving	Last week of April	…..

Unit wise lesson plan for the Even Semester, 2024-2025
Teacher: Babita Chaudhary   Class: BA 3rd

Section: A & B
Subject: Cooperative politics of U.k and U.S.A

Unit	Description of chapters/topics	Duration	Assignment/Test
Unit 1	**Evolution and basic Features of constitution of U.K & U.S.A**	1st week of January to last week of January	1st assignment in the beginning of last week of January
Unit 2	Comparative study of executive , legislation and judiciary system of U.K & U.S.A	1st week of Feb to last week of Feb.	Minor test in the 2nd week of Feb.
Unit 3	Comparative study of political parties and pressure groups of U.K & U.S.A	1st week of March to last week of March	2nd assignment in the 2nd week of March
Unit 4	Electoral processes ,voting behaviour and recent trends of working of the system of U.K & U.S.A	1st week of April to 15th April	2nd test in 2nd week of April
Revision	Revision, presentation, problem solving	Last week of April	…..

Unit wise Lesson Plan for Even Semester 2024-25

Department: Physics

Name of Teacher: Lt. Sombir

Class: B. Sc. 4th Semester

Subject: Physics (Statistical Mechanics)

CPL-402

Unit	Description of Chapter / Topics	Duration	Assignment / Test
Unit-1	Statistical Basis of Thermodynamics: - Statistical Basis, Probability and Frequency, Permutations and Combinations, Distribution of n distinguishable and indistinguishable particles in two boxes, Macrostate and Microstate, Thermodynamic Probability, Fluctuations and their Dependence on n : (narrowing of probability distribution with increasing n), Constraints on a System, Static and dynamics system, most probable state, Concept of cell in a compartment, Concept of Ensembles and type of Ensembles (Qualitative Idea only) Universal Law in Statistics: - Fundamental Postulates of Statistical Mechanics, Density of Quantum states of energy of a particle, Entropy and thermodynamics Probability, Statistical Interpretation of 2nd law of thermodynamics, Partition function and Relation with Thermodynamics Quantities	01-03-2025 to 15-03-2024	test
Unit-2	Kinetic Theory of Gases: - Maxwell-Boltzmann Law of Distribution of Particle speed in an Ideal Gas and its Experimental Verification, Mean, RMS and Most Probable Speeds. Molecular Collisions: - Mean Free Path. Collision Probability, Estimates of Mean Free Path, Transport Phenomenon in Ideal Gases: (1) Viscosity, (2) Thermal Conductivity (3) Diffusion. Brownian Motion and its Significance. Equipartition Law: Degrees of Freedom, Law of Equipartition of Energy (No proof required) and its application to the specific heat of monoatomic and diatomic gases and its limitations.	16-03-2025 to 31-03-2025	1st Assignment
Unit-3	Classical Statistics: - Phase space and Application to One Dimension Harmonic Oscillator and Free particle, Division of phase space into cells, Basic approach in three statistics, Maxwell-Boltzmann Distribution Law, Thermodynamic Functions of Finite Number of Energy Levels, Negative Temperature, Thermodynamic Functions of an Ideal Gas, Classical Entropy Expression, Gibbs Paradox	01-04-2025 to 10-04-2025	Minor test
Unit-4	Bose-Einstein Statistics: - B.E. distribution law, Thermodynamic functions of a Completely Degenerate Bose Gas, Bose-Einstein condensation, properties of liquid He (qualitative description), Radiation as photon gas, Bose's derivation of Planck's law. Fermi-Dirac Statistics: - Fermi-Dirac Distribution Law, Thermodynamic functions of an ideal Completely Degenerate, Fermi Gas, Fermi Energy, Electron gas in a Metal, Specific Heat of Metals, Comparison of three statistics M-B, B-E and F-D.	11-04-2025 to 20-04-2025	2nd Assignment
Revision		Till Exams	

Unit wise Lesson Plan for Even Semester 2024-25

Department: Physics

Name of Teacher: Lt. Sombir   Class: B. Sc. 4ᵗʰ Semester

Subject: Physics (Waves and Optics)   CPL- 403

Unit	Description of Chapter / Topics	Duration	Assignment / Test
Unit-1	Wave Motion: Wave Equation, Solution of wave equation, Particle and Wave Velocities, Intensity of Wave, Superposition Principle, Group velocity, Phase velocity Transverse Waves: The string as a force oscillator, Velocity of Transverse Vibrations of Stretched Strings, Reflections and transmission of waves on a string at a boundary, Transverse waves on a string, Travelling and standing waves on a string, Normal Modes of a string, Reflections and transmission of Energy. Longitudinal Waves: Velocity of Longitudinal Waves in a Fluid in a Pipe, Newton's Formula for Velocity of Sound, Laplace's Correction (qualitative), Reflections and transmission of sound waves at a boundary, Energy distribution in sound waves.	01-01-2025 to 15-01-2025	test
Unit-2	Interference: Division of amplitude and division of wave front, Young's Double Slit experiment, Lloyd's Mirror and Fresnel's Biprism, Phase change on reflection: Stokes' treatment, Interference in Thin Films: parallel and wedge-shaped films, Newton's Rings: measurement of wavelength and refractive index.	16-01-2025 to 31-01-2025	1st Assignment
Unit-3	Diffraction: Fresnel Diffraction: Fresnel's Assumptions, Fresnel's Half-Period Zones for Plane Wave, Rectilinear Propagation of Light, Theory of a Zone Plate and its application, Multiple Foci of a Zone Plate, Qualitative description for Fresnel diffraction pattern of a straight edge, a slit and a wire. Fraunhofer diffraction: Single slit, Double slit multiple slits and 'n' multiple slits, Diffraction grating and it's resolving power, Rayleigh Criteria of the limit of resolution and Resolving Power of a telescope.	01-02-2025 to 14-02-2025	Minor test
Unit-4	Polarization: Plane polarized light – production and analysis, Circular and elliptical polarization, Optical activity, Specific Rotation Fibre Optics: Optical Fibres - Construction and working, Critical angle of propagation, Modes of propagation, Acceptance angle, Attenuation. Advantages and applications of Optical Fibre	15-02-2025 to 28-02-2025	2ⁿᵈ Assignment
Revision		Till Exams	

Unit wise Lesson Plan for Even Semester 2024-25

Department: Physics

Name of Teacher: Lt. Sombir   Class: B. Sc. 4th Semester

Subject: Physics (Electrical Circuits and Network Skills)   CPS-409

Unit	Description of Chapter / Topics	Duration	Assignment / Test
Unit-1	Basic Electrical Components: Electronic components. Passive components. Resistors and their types. Color coding of resistors. Troubles in resistors. Capacitors and their types. Troubles in capacitors. Inductors and their types. Troubles in inductors. Internal resistance and impedance. Types of Electrical switches. "Single-pole Single-throw" (SPST) switch. "Single-pole Double-throw" (SPDT) switch. "Double-pole Double-throw" (DPDT) switch. Application of SPST , SPDT and DPDT switches. Electrical Protection and Electrical Wiring: Relays. Fuses and disconnect switches. Circuit breakers. Overload devices. Ground-fault protection. Grounding and isolating. Construction and working of MCB & MCCB and their uses. Different types of conductors and cables. Basics of wiring - Star and delta connection. Voltage drop and losses across cables and conductors.. Insulation. Solid and stranded cable. Preparation of extension board.	01-01-2025 to 15-05-2025	test
Unit-2	Electrical Energy Sources and Measurements: Real (practical) and ideal voltage source. Real (practical)current source. Conversion of voltage source into current source or vice-versa Maximum power transfer theorem. Thevenin theorem and norton's theorem. Familiarization with multimeter. Voltmeter and ammeter. AC source -single phase and three phase alternating current sources. Measurement of energy consumption in AC circuits. Digital Circuits: Difference between Analog and Digital Circuits, Binary Numbers, Decimal to Binary and Binary to Decimal Conversion, AND, OR and NOT Gates, Realization of AND, OR and NOT Gates using Diodes, resistances and Transistor, NAND and NOR Gates as Universal Gates, Realization of AND, OR and NOT Gates using NAND Gates only and NOR Gates only, XOR gates, XNOR Gates, De Morgan's Theorems, Boolean Laws.	16-02-2025 to 31-03-2025	1st Assignment
Revision		Till Exams	

Unit wise Lesson Plan for Even Semester 2024-25

Department: Physics

Name of Teacher: Lt. Sombir   Class: B. Sc. 2nd Semester

Subject: Physics (Electricity and Magnetism)   Paper Code - C24PHY201T

Unit	Description of Chapter / Topics	Duration	Assignment / Test
Unit-1	Vector Background and Electric Field: Gradient of a scalar and its physical significance, Line, Surface and Volume integrals of a vector and their physical significance, Flux of a vector field, Divergence and curl of a vector and their physical significance, Gauss's divergence theorem, Stoke's theorem. Conservative nature of Electrostatic Field, Electrostatic Potential, Potential as line integral of field, potential difference Derivation of electric field E from potential as gradient. Derivation of Laplace and Poisson equations. Electric flux, Gauss's Law, Differential form of Gauss's law and applications of Gauss's law	19-02-2025 to 28-02-2025	test
Unit-2	Magnetic Field: Biot-Savart law and its applications: straight wire and circular loop, Current Loop as a Magnetic Dipole and its Dipole Moment, Ampere's Circuital Law, and its applications to (1) Solenoid and (2) Toroid, Magnetic Properties of Matter: Force on a dipole in an external field, Electric currents in Atoms, Electron spin and Magnetic moment, types of magnetic materials, Magnetization vector (M), Magnetic Intensity (H), Magnetic Susceptibility and permeability, Relation between B, H and M, Electronic theory of dia and paramagnetism, Domain theory of ferromagnetism (Langevin's theory), B-H curve and hysteresis loop, importance of Hysteresis loop	01-03-2025 to 15-03-2025	1st Assignment
Unit-3	Time varying electromagnetic fields: Electromagnetic induction, Faraday's laws of induction and Lenz's Law, Self-inductance, Mutual inductance, Energy stored in a Magnetic field, Derivation of Maxwell's equations, Displacement current, Maxwell's equations in differential and integral form and their physical significance. Electromagnetic Waves: Electromagnetic waves, Transverse nature of electromagnetic wave, energy transported by electromagnetic waves, Poynting vector, Poynting's theorem. Propagation of Plane electromagnetic waves in free space & Dielectrics	15-03-2025 to 31-03-2025	Minor test
Unit-4	DC current Circuits: Electric current and current density, Electrical conductivity, and Ohm's law, Kirchhoff's laws for D.C. networks, Network theorems: Thevenin's theorem, Norton theorem, Superposition theorem. Alternating Current Circuits: A resonance circuit, Phasor, Complex Reactance and Impedance, Analysis for RL, RC and LC Circuits, Series LCR Circuit: (1) Resonance, (2) Power Dissipation (3) Quality Factor and (4) Band Width, Parallel LCR Circuit	01-04-2025 to 15-04-2025	2nd Assignment
Revision		Till Exams	

Unit wise Lesson Plan for Even Semester 2024- 25

Department: Physics

Name of Teacher: Dr. Pawan Kumar   Class: B. Sc 3rd NM

Subject: Physics   Paper: Quantum Mechanics

Unit	Description of Chapter / Topics	Duration	Remarks
Unit-1	Basics of Quantum Mechanics: Wave function Properties of wave-function, Orthogonality Time dependent Schrodinger wave equation, Time Independent Schrodinger Eq, Hermitian Operators- Eigenvalue and Eigen functions, Commutator relations of various operators, Probability current densities Expectation Values of Dynamical quantities, Particle in 1-dimention Infinite Square Well	17-02-2025 to 27-02-2025	
Unit-2	Application of Schrodinger Wave Equation: Solution of Schrodinger Equation for the Finite Potential Well, 1-Dimention Harmonic Oscillator problem barrier - Examples of alpha decay and tunnel diodes (qualitative only), Generalized uncertainty principles for Position-Momentum	28-02-2025 to 08-03-2025	Test
Unit-3	Larmor's precession, Spectroscopic terms and their notation, Selection rule, Orbital magnetic, Coupling scheme; LS or Russel-Saunders Coupling scheme and JJ coupling scheme, isotopic effect, Atom in external magnetic field; Normal Zeeman effect.	17-03-2025 to 30-03-2025	Assignment
Unit-4	Rotational spectra of diatomic molecules as rigid rotator, energy levels, Rotational spectra of diatomic molecules as non-rigid rotator, Intensity of rotational lines, Vibrational spectra, Vibrational-Rotational, Raman and electronic spectra of molecules: Vibrational energy of diatomic □Revision of the Syllabus	01-04-2025-15-04-2025	

Unit wise Lesson Plan for Even Semester 2024- 25

Department: Physics

Name of Teacher: Dr. Pawan Kumar   Class: B. Sc 3rd NM

Subject: Physics   Paper: Solid State Physics

Unit	Description of Chapter / Topics	Duration	Remarks
Unit-1	Crystal Structure I: Crystalline and glassy forms, liquid crystals, crystal structure, periodicity, lattice and basis, crystal translational vectors and axes. Winger Seitz primitive Cell, symmetry operations for a two dimensional crystal, Bravais lattices in two and three dimensions.	17-02-2025 to 27-02-2025	
Unit-2	Crystal Structure II: X-ray diffraction, Bragg's Law and experimental X-ray diffraction methods. K-space and reciprocal lattice and its physical significance, reciprocal lattice vectors, reciprocal lattice to a simple cubic lattice, b.c.c. and f.c.c Vibration of monoatomic and diatomic lattice, Acoustical and optical modes,	28-02-2025 to 08-03-2025	Test
Unit-3	.Band Theory: Free electron gas models, Nearly free electron model, Bloch function, Kronig Penny model, Velocity and Effective mass of electron, Distinction between metals, semiconductors and insulators, Hall Effect Dia-, Para-, Ferromagnetic Materials,	17-03-2025 to 30-03-2025	Assignment
Unit-4	Super Conductivity: Historical introduction, Survey of superconductivity, Super conducting systems, High Te Super conductors, Isotopic Effect, Critical Magnetic Field, Meissner Effect, Classification of Superconductors (type I and Type II), BCS Theory of Superconductivity, Flux quantization, Josephson Effect (AC and DC □Revision	01-04-2025-15-04-2025	

Unit wise Lesson Plan for Even Semester 2024- 25

Department: Physics

Name of Teacher: Dr. Pawan Kumar   Class: B. Sc 3rd NM

Subject: MDC Physics   Paper: Fundamental of Physics -II

Unit	Description of Chapter / Topics	Duration	Remarks
Unit-1	Light and Optics-Nature and properties of light, its speed, frequency, and wavelength; Reflection of light-types of reflection and their importance in daily life, laws of reflection, multiple reflection by mirrors and their applications.	17-02-2025 to 27-02-2025	
Unit-2	Refraction of light- laws of refraction, refractive index, refraction of light through prism (dispersion of light), formation Rainbow, twinkling of stars, advance Sunrise, and delayed Sunset; Scattering of light and blue colour of the sky; apparent depth, total internal reflection, and its important applications	28-02-2025 to 08-03-2025	Test
Unit-3	Electricity- electric charge, types of charges, unit of charge, frictional electricity, electricity by conduction and electric current, units of electric current, measurement of current, conductors and insulators; resistance, resistivity and Ohm's law,	17-03-2025 to 30-03-2025	Assignment
Unit-4	Electric potential and potential difference, emf; Electric circuit- resistor, capacitor, battery, ammeter and voltmeter; Series and parallel combinations of resistors, electrical wiring in houses and electrical safety (fuse, hot wire, neutral, ground and short circuit), electric power and electric power transmission; Heating effect of current and its practical applications.	01-04-2025-15-04-2025	

Unit wise Lesson Plan for Even Semester 2024-25

Department: Physical Education

Name of Teacher: Dr. Rajni Saini   Class: B.A. 4th Sem

Subject: Physical Eduaction

Unit	Description of Chapter / Topics	Duration	Assignment / Test
Unit-1	: Warming up and Cooling Down (1) Meaning, types and significance of warming up (ii) Meaning, types and significance of cooling down (iii) Methods of warming up and cooling down. (iv) Physiological aspects of warming up and cooling down.	3rd week of January 2025 to 1st week of Feb 2025	Ist Assignment
Unit-2	Psychological Aspects of Physical Education (1) Meaning of Psychology and sports Psychology (ii) Need and importance of sports psychology (iii) Leaming: meaning and laws (iv) Learning curve	2nd Week of Feb to last week of Feb 2025	Unit Test-I
Unit-3	: Major Sports Events (1) Ancient Olympic Games (ii) Modern Olympic Games (iii) Asian Games (iv) Common Wealth Games	1st week of March to 3rd week of March 2025	2nd Assignment
Unit-4	: Anatomy and Physioloigy of Human Body System (1) Structure of Respiratory Organs (ii) Physiology of Respiratory System (iii) Effect of exercise on Respiratory system (iv) Terminology of respiration: Tidal Volume, Residual Volume and Total Lung Capacity	Last week of March to 2nd week of April 2025	
Revision		3rd week of April to till Exam May 2025	

Unit wise Lesson Plan for Even Semester 2024-25

Department: Physical Education

Name of Teacher: Dr. Rajni Saini   Class: B.A. 6th Sem

Subject: Physical Education

Unit	Description of Chapter / Topics	Duration	Assignment / Test
Unit-1	Meaning and Definitions of Motivation. Types of Motivation and Importance of Motivation in Sports. Types of Motivation. Importance of Motivation in Physical Education. Meaning of Socialization and Socialization through Sports Meaning of Socialization. Socialization Through Sports. Effects of Social behavior on the Performance of Sports Persons	3rd week of January 2025 to 1st week of Feb 2025	Ist Assignment
Unit-2	Concept of Sports Training and Doping Meaning and Definitions of Sports Training Meaning of Sports Training Definitions of Sports Training Factors Affecting Sports Training Types of Sports Training: Circuit Training, Interval Training and ContinuousTraining.Advantages of Circuit Training Doping: Meaning, Types and Its Effects on Health Meaning of Doping. Types of Doping Effects of Doping on the Health	2nd Week of Feb to last week of Feb 2025	Unit Test-I
Unit-3	Concept of Sport Bio-mechanics. Meaning and Definition of sports Biomechanics.Importance of Biomechanics in Sports.Newton's Laws of Motion andtheir Application in Sports.Lever's Meaning, types and their application in Sports .Meaning of lever Types of Levers	1st week of March to 3rd week of March 2025	2nd Assignment
Unit-4	Anatomy and Physicology. Meaning Digestion.Organs of Digestive System.Structure of Digestive System. Mechanism of Degistive System Effects of Exercise on Digestive System	Last week of March to 2nd week of April 2025	
Revision		3rd week of April to till Exam May 2025	

Unit wise Lesson Plan for Even Semester 2024-25

Department: Physical Education

Name of Teacher: Dr. Rajni Saini   Class: B.A. 2nd Sem.

Subject: Physical Education   Course Code: C24PHE201T

Unit	Description of Chapter / Topics	Duration	Assignment / Test
Unit-1	**Introduction to Athletics** Brief History of Athletics National and International Governing bodies of Athletics Events of Athletics for Men and Women Marking of Athletics track 200m Marking of Athletics track 400m	3rd week of Feb 2025 to 1st week of March 2025	1st Assignment
Unit-2	**Sprints, Hurdles and Relaying race events** Basics Rules of Sprints events: 100m, 200 and 400m Basics Rules of Hurdle events: 100m, 110 and 400m Basics Rules of Relay races: (4x100) and(4x440) Specification of starting blocks, Batons and Shoes used athletes in these events Famous Indian Athletes of Sprint and Hurdle events	2nd week of March 2025 to 1st week of April 2025	Unit Test-I
Unit-3	**Middleand LongDistance races and 3000m Steeplechase** Basics Rules of Middle distanceRaces: 800m and 1500m Basics Rules of Long Distance Races: 3000m, 5000m and 10000m Basics Rules of Steeplechase: 3000m Specification of Hurdle and water jumps in Steeplechase Famous Indian Athletes of Middle & Long	2nd week of April 2025 to 1st week of May 2025	2nd Assignment

	Distance races and 3000m Steeplechase		
Revision		2nd week of May to till exam May-June	

CLASS:B.Sc.(Hons)Mathematics-IIYearIIISem

NAME OF PAPER–Calculus-II

SR. NO.	MONTHS	PERIOD	TOPICS
1.	January	1st week	Continuity, Sequential Continuity, properties of continuous functions, Uniform continuity, chain rule of differentiability.
		2nd week	Mean value theorems; Rolle's Theorem and Lagrange's mean value theorem and their geometrical interpretations.
		3rd week	Taylor's Theorem with various forms of remainders,
		Lastweek	Darboux intermediate value theorem for derivatives, Indeterminate forms.
2.	February	1st week	Limit and continuity of real valued functions of two variables.
		2nd week	Partial differentiation. Total Differentials; Composite functions & implicit functions. Change of variables.
		3rd week	Homogenous functions & Euler's theorem on homogeneous functions.
		Lastweek	Taylor's theorem for functions of two variables
3.	March	1st week	Differentiability of real valued functions of two variables. Schwarz and Young's theorems. Implicit function theorem.
		2nd week	
		3rd week	Maxima, Minima and saddle points of two variables. Lagrange's method of multipliers
		Lastweek	
4.	April	1st week	Curves: Tangents, Principal normals, Binormals, Serret-Frenet formulae. Locus of the centre of curvature,
		2nd week	Spherical curvature, Locus of centre of Spherical curvature,
		3rd week & Lastweek	Involutes, evolutes, Bertrand Curves. Surfaces: Tangent planes, one parameter family of surfaces, Envelopes.

NAME OFPAPER–<u>Solid Geomerty</u>
PAPER CODE- B<u>ML-401</u>

SR. NO.	MONTHS	PERIOD	TOPICS
1.	**January**	**1st** **week2nd** **week3rd** **week** **Lastweek**	General equation of second degree. Tracing of conics. Tangent at any point to the conic, chord of contact, pole of line to the conic, director circle of conic. System ofconics. Confocal conics. Polar equation of a conic, tangent and normal to theconic.
2.	**February**	**1stweek** **2ndweek** **3rdweek** **Lastweek**	Sphere: Plane section of a sphere. Sphere through a given circle. Intersection of twospheres, radical plane of two spheres. Co-axalsystemofspheres Cones. Right circular cone, enveloping coneand reciprocal cone. Cylinder:Rightcircularcylinderandenveloping cylinder
3.	**March**	**1stweek** **2ndweek** **3rdweek** **Lastweek**	CentralConicoids:Equationoftangentplane. Director sphere. Normal to theconicoids. Polar plane of a point. Envelopingconeofacoincoid. Envelopingcylinderofacoincoid.
4.	**April**	**1stweek** **2ndweek** **3rdweek** **Lastweek**	Paraboloids:Circularsection, Plane sections of conicoids. 3.Generating lines. Confocal conicoid. 4.Reductionofseconddegreeequations.

NAMEOFPAPER–ElementaryPartialDifferentialEquations
PAPERCODE-BML-403

SR. NO.	MONTHS	PERIOD	TOPICS
1.	**January**	**1stweek &2ndweek**	1.Partial differential equations: Formation, order and degree, Linear and Non-Linear Partialdifferential equations of the first order: Complete solution,singular solution, Generalsolution,
		3rdweek	3.Solution of Lagrange's linear equations, Charpit's general method of solution.
		Lastweek	4.Compatiblesystemsoffirstorderequations,Jacobi's method.
2.	**February**	**1stweek**	Linear partial differential equations of second and higher orders,
		2ndweek	Linear and non-linearhomogeneous and non-homogeneous equations with constant coefficients,
		3rdweek	Partialdifferential equation with variable coefficients reducible to equations with constant coefficients, their complimentary functions and particular integrals,
		Lastweek	Equationsreducibleto linearequationswithconstantcoefficients.
3.	**March**	**1stweek**	Classification of linear partial differential equations of second order, hyperbolic,parabolic and elliptic types,
		2ndweek	Reduction of second order linear partial differential equations toCanonical (Normal)forms and their solutions,
		3rdweek	Solutionoflinearhyperbolicequations,
		Lastweek	Monge's method for partial differential equations of second order.
4.	**April**	**1stweek**	Cauchy's problem for second order partial differential equations,
		2ndweek	Characteristic equationsand characteristic curves of second order partial differential equation,
		3rdweek	Method of separationof variables: Solutionof Laplace's equation,
		Lastweek	Waveequation(oneandtwodimensions), Diffusion (Heat) equation (one and two dimension) in Cartesian Co-ordinate system.

NAME OF PAPER –Special Functions-II
PAPER CODE-BML-406

SR. NO.	MONTHS	PERIOD	TOPICS
1.	January	1stweek 2nd week3 rdweek Lastweek	**Laguerre Polynomials:**Laguerre's equation and itssolution, generatingfunction, alternative expression for the Laguerrepolynomials, explicit expressions and special values of the Laguerre polynomials,
2.	February	1stweek 2ndweek 3rdweek Lastweek	orthogonalitypropertiesofLaguerrepolynomials, relation between Laguerre polynomials and theirderivatives, recurrence relations, associatedLaguerre polynomials, propertiesoftheassociatedLaguerrepolynomials.
3.	March	1stweek 2ndweek 3rdweek Lastweek	**Hypergeometric functions:**The hypergeometricseries, an integral formula for thehypergeometricseries, the hypergeometric equation, linear relation between the solutions of the hypergeometric equation, relationofcontiguity,
4.	April	1stweek& 2ndweek 3rdweek & Lastweek	1theconfluenthypergeometricfunction, 2generalizedhypergeometricseries

Unit wise Lesson Planfor EVEN Semester 2024-25
Department: Mathematics

Name of Teacher: Dhanesh Kumar   Class:B.Sc.I(Hons)

Subject code:C24MAT202T   Paper:Number Theory and Trigonometry

SR.NO.	MONTHS	PERIOD	TOPICS
1.	January	1st week 2nd week 3rd week Lastweek	Divisibility,G.C.D.(greatestcommondivisors),L.C.M.(least commonmultiple)Primes,FundamentalTheoremofArithmetic. LinearCongruences,Fermat'stheorem.Wilson'stheoremandits converse. Linear Diophantine equations in two variables.
2.	February	1st week 2nd week 3rd week Lastweek	Completeresiduesystemandreducedresiduesystemmodulom. Euler'sϕfunctionEuler'sgeneralizationofFermat'stheorem. ChineseRemainderTheorem.Quadraticresidues.Legendre symbols.Lemmaof Gauss; Gaussreciprocitylaw.Greatestinteger function[x].Thenumberofdivisorsandthesumofdivisorsofa natural number n(The functionsd(n)andσ(n)). Moebiusfunction and Moebius inversion formula.
3.	March	1st week 2nd week 3rd week Lastweek	De Moivre's Theorem and its Applications. Expansion of trigonometricalfunctions.Directcircularandhyperbolicfunctions and their properties.
4.	April	1st week 2nd week 3rd week Lastweek	Inverse circular and hyperbolic functions and their properties. Logarithmofacomplexquantity.Gregory'sseries.Summationof Trigonometry series.

Unit wise Lesson Plan for Even Semester 2024-245
Department: Mathematics

Name of Teacher: Manish Gautam   Class: B.C.A I-2nd Sem
Subject: Mathematics   Paper:Mathematical foundations for CS-II(C24MIC224T(ii))

Unit	Description of Chapter / Topics	Duration	Assignment / Test/Remarks
Unit-1	Measure of central tendency,overview of mean,arithmetic mean,geometric mean,harmonic mean,median and mode.measure of dispersion:standard deviation,variance,range,percentile,quartile,interquartile range,moments and moment generating functions.	15-02-2025 to 20-03-2025	
Unit-2	Probabiltydefinition and various approaches of probability,addition theorem ,boole's inequality ,conditional probability and multiplication theorem ,independent events,Bayes' theorem and its applications. Random Variable and Probability Functions: Definition and properties of random variables, discrete and continuous random variable, probability mass and density functions, distribution function.concepts of bivariate random variable :joiny,marginal and conditional distributions ,correlation and regression,ranl correlation,correlation coefficient.	25-03-2025 to 23-04-2025	
Revision	Revision of the Syllabus	23-04-2025 to Exam	

Unit wise Lesson Plan for Even Semester 2024-25

Department: Mathematics

Name of Teacher:Manish Gautam 	Class:B.Sc.III (H)-6th Sem

Subject:Mathematics 	Paper: Dynamic(BML605)

Unit	Description of Chapter / Topics	Duration	Assignment / Test/Remarks
Unit-1	Velocity and acceleration along radial,transverse,tangential and normal directions.Relative velocity and acceleration. Simple harmonic motion.Elastic strings.	02-01-2025 to 25-01-2025	
Unit-2	Mass,Momentum and Force.Newton's laws of motion.Work,Powerand Energy.Definitions of Conservative forces and Impulsive forces.	27-01-2025 to 20-02-2025	
Unit-3	Motion on smooth and rough plane curves.Projectile motion of a particle in a plane. Vector angular velocity.	21-02-2025 to 22-03-2025	Holy Vacations 09-03-2025 to 16-03-2025
Unit-4	General motion of a rigid body.Central Orbits, Kepler laws of motion. Motion of a particle in three dimensions.Acceleration in terms of different co- ordinate systems.	24-03-2025 to 19-04-2025	
Revision	Revision of the Syllabus	21-04-2025 to Exam	

Semester: 6   Subject: Mathematics   Paper: Linear Algebra

Unit	Description of Chapter/Topic	Duration	Assignment/Test/ Remarks
Unit 1	Vector spaces, subspaces, Sum and Direct sum of subspaces, Linear span, Linearly Independent and dependent subsets of a vector space. Finitely generated vector space,Existence theorem for basis of a finitely generated vactor space, Finite dimensional vector spaces, Invariance of the number of elements of bases sets, Dimensions, Quotient space and its dimension.	01-01-2025 to 10-01-2025 And 25-02-2025 to 03-03-2025	Verbly test
Unit 2	Homomorphism and isomorphism of vector spaces, Linear transformations and linear forms on vactor spaces, Vactor space of all the linear transformations Dual Spaces, Bidual spaces, annihilatorof subspaces of finite dimentional vactor spaces, Null Space, Range space of a linear transformation, Rank and Nullity Theorem,	03-03-2025 to 21-03-2025	Ist Assignment
Unit 3	Algebra of Linear Transformation, Minimal Polynomial of a linear transformation.Singular and non-singular linear transformations, Matrix of a linear Transformation, Change of basis, Eigen values and Eigen vectors of linear transformations.	21-03-2025 To 10-04-2024	Minor test
Unit 4	Inner product spaces, Cauchy-Schwarz inequality, Orthogonal vectors, Orthogonal complements, Orthogonal sets and Basis, Bessel's inequality for finite dimensional vector spaces,GramSchmidt,Orthogonalization process, Adjoint of a linear transformation and its properties, Unitary linear transformations.	10-04-2024 to 30-04-2025	2nd Assignment
Revision		01-05-2025 to Exam	

Government College Hansi

Unit wise Lesson Plan for even Semester, 2024-25

Name of Teacher : Mr. Sandeep Kumar

Class: B.Sc 2nd (H) 3rd semester

Semester: 4   Subject: Mathematics   Paper *Transform Techniques*

Unit	Description of Chapter/Topic	Duration	Assignment/Test/ Remarks
Unit 1	*Laplace Transform:* – Existence theorem for Laplace transforms, Linearity of the Laplace transforms, Shifting theorems, Laplace transforms of derivatives and integrals, Differentiation and integration of Laplace transforms, Convolution theorem, Inverse Laplace transforms, convolution theorem, Inverse Laplace transforms of derivatives and integrals, solution of ordinary differential equations using Laplace transform	01-01-2025 to 10-01-2025 And 25-02-2025 to 03-03-2025	Verbly test
Unit 2	inite Laplace transformation: Definition and Properties, shifting and scaling theorem. *Fourier transforms:* Linearity property, Shifting, Modulation, Convolution Theorem,Fourier Transform of Derivatives, Relations between Fourier transformand Laplace transform, Parseval's identity for Fourier transforms, solution of differential Equations usingFourier Transforms.	03-03-2025 to 21-03-2025	Ist Assignment
Unit 3	*Mellin Transform:* Definition and Properties of Mellin transform, shifting and scaling properties, Mellin transform of derivaties and integral. *Z-Tranform:-* Z-Tranform and inverse Z-Tranform of elementary function, shifting theorem, Convolution theorem, initial and final value theorem	21-03-2025 To 10-04-2024	Minor test
Unit 4	*Hankel Tranform:* Basic properties of Hankel transform, Basic Operational properties,Hankel transform of derivatives and some elementary functions, Relation	10-04-2024 to 30-04-2025	2nd Assignment

	between Fourier and Hankel transform with application to boundary value problem and PDE.		
Revision		01-05-2025 to Exam	

Government College Hansi
Unit wise Lesson Plan for even Semester, 2024-25
Name of Teacher : Mr. Sandeep Kumar
Class:B.A./ B.Sc 3rd

Semester: 6   Subject: Mathematics   Paper : Real and complex Analysis

Unit	Description of Chapter/Topic	Duration	Assignment/Test/ Remarks
Unit 1	Definition and examples metric spaces, neighborhoods, Limit points, interior points, open and closed sets, closure and interior, boundary points, Subspace of a metric space, equivalent metrics, Cauchy sequences, completeness, Cantor's intersection theorem.	01-01-2025 to 10-01-2025 And 25-02-2025 to 03-03-2025	Verbly test
Unit 2	Baire's category theorem, Contraction Principle,Continuous functions, uniform continuity, compactness for metric spaces,Sequential Compactness Bolzano-WeierstrassProperty,Total boundedness, finite intersection property, continuity in relation with compactness, connectedness.	03-03-2025 to 21-03-2025	Ist Assignment
Unit 3	Improper integrals and their convergence, comparison tests,Abel's and Dirichlet's test Frullani's integral, Integral as a function of a parameter. Continuity, differentiability and integrability of an integral of a function of a parameter.	21-03-2025 To 10-04-2024	Minor test
Unit 4	Topology of complex numbers: Trigonometric, exponential, logarithmic and hyperbolic trigonometric functions. Extended complex plane, Stereographic projection of complex numbers Continuity and differentiability of complex functions. Analytic functions, Cauchy-Riemann equations, harmonic conjugates, harmonic functions Construction of analytic functions: direct method and Milne-Thomson method	10-04-2024 to 30-04-2025	2nd Assignment
Revision		01-05-2025 to Exam	

Semester: 2   Subject: **MDC Mathematics**   Paper *C24MDC219T: Financial Mathematics*

Unit	Description of Chapter/Topic	Duration	Assignment/Test/ Remarks
Unit 1	Simple interest, bank discount, Compound interest	15-02-2025 to 20-03-2025	Verbly test
Unit 2	Annuities, future value and present value of annuity, total amount of annuity and application of annuity	20-03-2025 to 04-03-2025	Ist Assignment
Unit 3	Data: Raw and organised data, Frequency, Grouped data. Representation of data: Pictograph, Bar Graphs, Double Bar Graph, Histogram, Pie Charts. Chance and Probability: Chance, Random Experiment, Equally likely outcomes, Outcomes as Events, Probability. *Recommended Book*.	05-04-2025 To 30-04-2024	Minor test AND 2ND Assignment
Revision		01-05-2025 to Exam	

Lesson Plan
Government College Hansi
2024-25(Even Semester)

Teacher Name: Dr. Priyanka **Subject:** Real &Complex Analysis

Class: B.Sc. III (Hons) **Department**: Mathematics

Unit	Description of chapter/ Topics	Duration	Assignment/ Test
Unit-1	Jacobians, Beta and Gama functions, Double and Triple integrals, Dirichlets integrals, change of order of integration in double integrals.	January	Assignment-1
Unit-2	Fourier's series: Fourier expansion of piecewise monotonic functions, Properties of Fourier Co-efficients, Dirichlet's conditions, Parseval's identity for Fourier series, Fourier series for even and odd functions, Half range series, Change of Intervals.	February	Minor Test-1
Unit-3	Extended Complex Plane, Stereographic projection of complex numbers, continuity and differentiability of complex functions, Analytic functions, Cauchy-Riemann equations. Harmonic functions.	March	Minor Test-2
Unit-4	Mappings by elementary functions: Translation, rotation, Magnification and Inversion. Conformal Mappings, Mobius transformations. Fixed pints, Cross ratio, Inverse Points and critical mappings.	1st April to 20th April 2025	Quiz
Revision		22nd April to Sem End Exam 2025	Presentation

Lesson Plan
Government College Hansi
2024-25(Even Semester)

Teacher Name: Dr. Priyanka   **Subject:** Linear Algebra

Class: B.A III/ B.Sc III   **Department**: Mathematics

Unit	Description of chapter/ Topics	Duration	Assignment/ Test
Unit-1	Vector spaces, subspaces, Sum and Direct sum of subspaces, Linear span, Linearly Independent and dependent subsets of a vector space. Finitely generated vector space, Existence theorem for basis of a finitely generated vector space, Finite dimensional vector spaces, Invariance of the number of elements of bases sets, Dimensions, Quotient space and its dimension.	January	Assignment-1
Unit-2	Homomorphism and isomorphism of vector spaces, Linear transformations and linear forms on vector spaces, Vector space of all the linear transformations Dual Spaces, Bidual spaces, annihilator of subspaces of finite dimensional vector spaces, Null Space, Range space of a linear transformation, Rank and Nullity Theorem	February	Minor Test-1
Unit-3	Algebra of Linear Transformation, Minimal Polynomial of a linear transformation, Singular and non-singular linear transformations, Matrix of a linear Transformation, Change of basis, Eigen values and Eigen vectors of linear transformations.	March	Minor Test-2
Unit-4	Inner product spaces, Cauchy-Schwarz inequality, Orthogonal vectors, Orthogonal complements, Orthogonal sets and Basis, Bessel's inequality for finite dimensional vector spaces, Gram-Schmidt, Orthogonalization process, Adjoint of a linear transformation and its properties, Unitary linear transformations.	1st April to 20th April 2025	Quiz
Revision		22nd April to Sem End Exam 2025	Presentation

Lesson Plan
Government College Hansi
2024-25(Even Semester)

Teacher Name: Dr. Priyanka   **Subject:** Mechanics

Class: B.A II/ B.Sc II   **Department**: Mathematics

Unit	Description of chapter/ Topics	Duration	Assignment/ Test
Unit-1	Composition and resolution of forces. Parallel forces. Moments and Couples.	January	Assignment-1
Unit-2	Forces in three dimensions. Wrenches. Null lines and planes. Stable and unstable equilibrium.	February	Minor Test-1
Unit-3	Velocity and acceleration along radial, transverse, tangential and normal directions. Relative velocity and acceleration. Simple harmonic motion. Elastic strings.	March	Minor Test-2
Unit-4	General motion of a rigid body. Central Orbits, Kepler laws of motion	1st April to 20th April 2025	Quiz
Revision		22nd April to Sem End Exam 2025	Presentation

Lesson Plan
Government College Hansi
2024-25(Even Semester)

Teacher Name: Dr. Priyanka   **Subject:** PDE & Special Function

Class: B.A II/ B.Sc II   **Department**: Mathematics

Unit	Description of chapter/ Topics	Duration	Assignment/ Test
Unit-1	Partial differential equations: Formation, order and degree, Linear and Non-Linear Partial differential equations of the first order: Complete solution, singular solution, General solution, Solution of Lagrange's linear equations, Charpit's general method of solution. Compatible systems of first order equations, Jacobi's method.	January	Assignment-1
Unit-2	Linear partial differential equations of second and higher orders, Linear and non-linear homogeneous and non-homogeneous equations with constant coefficients, Partial differential equation with variable coefficients reducible to equations with constant coefficients, their complimentary functions and particular integrals, Equations reducible to linear equations with constant coefficients.	February	Minor Test-1
Unit-3	Classification of linear partial differential equations of second order, hyperbolic, parabolic and elliptic types, Reduction of second order linear partial differential equations to Canonical (Normal) forms and their solutions, Solution of linear hyperbolic equations, Monge's method for partial differential equations of second order.	March	Minor Test-2
Unit-4	Series solution of differential equations – Power series method, Definitions of Beta and Gamma functions. Bessel equation and its solution: Bessel functions and their propertiesConvergence, recurrence, Relations and generating functions, Orthogonality of Bessel functions	1st April to 20th April 2025	Quiz
Revision		22nd April to Sem End Exam 2025	Presentation

Lesson Plan
Government College Hansi
2024-25(Even Semester)

Teacher Name: Dr. Priyanka   **Subject:** Solid Geometry

Class: B.A III/ B.Sc III   **Department**: Mathematics

Unit	Description of chapter/ Topics	Duration	Assignment/ Test
Unit-1	Central Conicoids: Equation of tangent plane. Director sphere. Normal to the conicoids. Polar plane of a point. Enveloping cone of a coincoid. Enveloping cylinder of a coincoid.	01 January to February 2025	Assignment-1
Unit-2	Paraboloids: Circular section, Plane sections of conicoids. Generating lines. Confocal conicoid. Reduction of second degree equations.	1st February to April 2025	Minor Test-1
			Minor Test-2
			Quiz
Revision		April	Presentation

SR. NO.	MONTHS	PERIOD	TOPICS
1.	1st	1st week 2nd week 3rd week Last week	**1. ε-δ definition of the limit of a function. Basic properties of limits,** **2.Continuous functions and classification of discontinuities.** **3.Differentiability.Successive differentiation. Leibnitz theorem.** **4. Maclaurin's and Taylor's series expansions..**
2.	2nd	1st week 2nd week 3rd week Last week	1. Indeterminate forms. 2. Limit and continuity of real valued functions of two variables. Partial differentiation. 3. Total differentials, Partial derivatives of Composite functions 4. Partial derivatives of Implicit functions using change of variables
3.	3rd	1st week 2nd week 3rd week Last week	**1. Homogenous functions & Euler's theorem on homogeneous functions.** **2. Taylor's theorem for functions of two variables.** **3. Differentiability of real valued functions of two variables.** **4. Schwarz's and Young's theorem.** .
4.	4th	1st week 2nd week 3rd week Last week	**1. Maxima, minima and saddle points of functions of two variables.** **2. Lagrange's method of multipliers.** **3. Beta and Gamma Functions,**

			4. Double and triple integrals.

CLASS:B.Sc./B.A.-IYear IISem
NAME OF PAPER – CALCULUS LAB
COURSE CODE - C24MAT201P
COURSE TYPE– DSC

SR. NO.	MONTHS	PERIOD	TOPICS
1.	1st	1st week 2nd week 3rd week Last week	1. To learn the basic concept of limit and limit at infinity. 2. Having the knowledge about tangent line, singular points of a curve 3. To check the symmetry of a curve about x-axis, y-axis and a line. 4. To find the asymptotes of a curve
2.	2nd	1st week 2nd week 3rd week Last week	1. To visualise the concavity and inflexion point of a curve. 2. To explore the formal definition ($\varepsilon \_ \delta$) of limit. 3. Find derivatives of algebraic, trigonometric, logarithmic, exponential functions etc. 4. Gain the knowledge about the applications of calculus in optimization problems
3.	3rd	1st week 2nd week 3rd week Last week	**1. To check the symmetry of a given curve.** **2. Identifying the zeros, horizontal, vertical and oblique asymptotes of a given function.** **3. Illustrating the regions of concave up and concave down of a curve.** **4. To find the inflexion point of a curve.** .
4.	4th	1st week 2nd week 3rd week Last week	**1. To plot curves involving Cartesian and parametric coordinates.** **2. To find partial derivatives of a function.** **3. To find total differential of a function of two variables.** **4. To find the absolute maximum and minimum value of function of one and two variables also find maxima or minima using method of Lagrange's multipliers**

CLASS:B.A -I Year II Sem
NAME OF PAPER – NUMERICAL METHOD LAB
COURSE CODE - C24SEC229P
COURSE TYPE - SEC

SR. NO.	MONTHS	PERIOD	TOPICS
1.	1st	1st week 2nd week 3rd week Last week	1. To find the roots of algebraic and transcendental equations using Bisection method. 2. To find the roots of algebraic and transcendental equations using Regula-Falsi method. 3. To find the roots of algebraic and transcendental equations using Secant method.
2.	2nd	1st week 2nd week 3rd week Last week	1. To find the roots of algebraic and transcendental equations using Newton-Raphson's method. 2. To solve the system of linear equations using Gauss -elimination method. 3. To solve the system of linear equations using Triangularization method.
3.	3rd	1st week 2nd week 3rd week Last week	1. To find the largest eigen value of a matrix using Power method. 2. To find numerical solution of ordinary differential equations using Euler's method.
4.	4th	1st week 2nd week 3rd week Last week	1. To find numerical solution of ordinary differential equations using Modified Euler's method. 2. To find numerical solution of ordinary differential equations using Runge -Kutta method

SR. NO.	MONTHS	PERIOD	TOPICS
1.	1ˢᵗ	1st week & 2ⁿᵈweek 3ʳᵈ week & Last week	**Write down and execute the following programs using C-Programming Language** 1. To solve the system of linear equations using Gauss -elimination method. 2. To solve the system of linear equations using Gauss -Seidal iteration method.
2.	2ⁿᵈ	1ˢᵗ week & 2ⁿᵈ week 3ʳᵈ week & Last week	3. To solve the system of linear equation using Gauss –jordan method. 4. To find the largest eigen value of a matrix by Power -method.
3.	3ʳᵈ	1ˢᵗ week & 2ⁿᵈ week 3ʳᵈ week & Last week	5. To integrate numerically using Trapezoidal rule. 6. To integrate numerically using Simpson's one-third rule. 7. To integrate numerically using Simpson's three-eighth rule.
4.	4ᵗʰ	1ˢᵗ week & 2ⁿᵈ week 3ʳᵈ week & Last week	8. To find numerical solution of ordinary differential equations by Euler's method/ Modified Euler's method. 9. To find numerical solution of ordinary differential equations by Runge -Kutta method.

CLASS: B.Sc.(Hons) Mathematics-III Year VI Sem
NAME OF PAPER – Numerical Analysis
PAPER CODE - BML-603

SR. NO.	MONTHS	PERIOD	TOPICS
1.	1st	1st week 2nd week 3rd week Last week	1Finite Differences operators and their relations. Finding the missing terms and effect of error in a difference tabular values, 2.Interpolation with equal intervals: Newton's forward and Newton's backward interpolation formulae. 3. Interpolation with unequal intervals: Newton's divided difference, 4. Lagrange's Interpolation formulae.
2.	2nd	1st week 2nd week 3rd week Last week	1.Central Differences: Gauss forward and Gauss's backward interpolation formulae, 2.Sterling, Bessel Formula. 3. Eigen Value Problems: Power method, Jacobi's method, Given's method, 4.House-Holder's method, QR method, Lanczos method.
3.	3rd	1st week & 2nd week 3rd week & Last week	1.Numerical Differentiation: Derivative of a function using interpolation formulae as studied in Sections–I & II. 2.Numerical Integration: Newton-Cote's Quadrature formula, Trapezoidal rule, Simpson's one- third and three-eighth rule, Gauss Quadrature formula.
4.	4th	1st week 2nd week 3rd week Last week	1.Difference equation: Formation of difference equation, Linear difference equation, 2.Difference equation reducible to linear form. Numerical solution of ordinary differential equations: Single step methods-Picard's method. 3.Taylor's series method, Euler's method, Runge-Kutta Methods. Multiple step methods; 4.Predictor-corrector method, Modified Euler's method, Milne-Simpson's method.

S R. N O.	MONTHS	PERIOD	TOPICS
1.	1st	**1st week** **2nd week** **3rd week** **&** **Last week**	Programming in C 1 To integrate numerically using Trapezoidal rule. 2. To integrate numerically using Simpson's one-third rule. 3. To integrate numerically using Simpson's three-eighth rule.
2.	2nd	**1st week** **&** **2nd week** **3rd week** **&** **Last week**	4.To find numerical solution of ordinary differential equations by Euler's method/ Modified Euler's method, Taylor's series Method To find numerical solution of ordinary differential equations by Runge -Kutta method.
3.	3rd	**1st week** **&** **2nd week** **3rd week** **&** **Last week**	7 To interpolate the data using Newton's forward interpolation formula 8 To interpolate the data using Newton's backward interpolation formula
4.	4th	**1st week** **&** **2nd week** **3rd week** **Last week**	9. To interpolate the data using Gauss's forward interpolation formula 10. To interpolate the data using Gauss's backward interpolation formula 11. To interpolate the data using Lagrange's interpolation formula

Unit wise Lesson Plan for Even Semester 2024-25

Department: Mathematics

Name of Teacher:Manish Gautam   Class: B.Sc.III &B.A.-6th Sem

Subject: Mathematics   Paper:Mechanics II(CML606(i))

Unit	Description of Chapter / Topics	Duration	Assignment / Test/Remarks
Unit-1	Analytical conditions of equilibrium of co-planar forces: Equilibrium of three forces, conditions of equilibrium, trigonometric theorem's, conditions of equilibrium of co-planar forces (First, Second and Third form); Friction: Definition of friction and basic laws, problems based on equilibrium of rods and ladders; Centre of gravity: Basic concepts and definitions, centre of gravity of a uniform rod, a thin uniform lamina in the form of a parallelogram, a thin uniform triangular lamina, three uniform rods forming a triangle, a uniform quadrilateral lamina, lamina in the form of a trapezium, centre of gravity of a body by integration.	02-01-2025 to 25-01-2025	
Unit-2	Motion of a particle attached to an elastic string, Hooke's law, motion of horizontal and vertical elastic strings, Definition of work, Power and Energy, work done by a variable force, work done in stretching an elastic string, principle of work and energy, conservative system of forces, principle of conservation of energy, impulse of a constant force and a variable force	27-01-2025 to 20-02-2025	
Unit-3	Motion of a particle on smooth curves, motion on the outside and inside of a smooth vertical circle, cycloidal motion, motion on a rough curve under gravity.	21-02-2025 to 22-03-2025	Holy Vacations 09-03-2025 to 16-03-2025
Unit-4	Projectile motion of a particle in a plane, velocity at any point of the trajectory, directions of projection for a particle, range and time of flight on an inclined plane, directions of projection for a given velocity and a given range; range and time of fight down an inclined plane.	24-03-2025 to 19-04-2025	
Revision	Revision of the Syllabus	21-04-2025 to Exam	

Unit wise Lesson Plan for Even Semester 2024-25

Department: Mathematics

Name of Teacher:Manish Gautam   Class:B.Sc.III (H)-6th Sem
Subject:Mathematics   Paper: Mathematical Modelling(BML606)

Unit	Description of Chapter / Topics	Duration	Assignment / Test/Remarks
Unit-1	The process of Applied Mathematics: Mathematical modeling, need, techniques, classification and illustrative.	02-01-2025 to 25-01-2025	
Unit-2	Mathematical modeling through ordinary differential equation of first order. Mathematical modeling in population dynamics, mathematical modeling of epidemic and compartment models through system of ordinary differential equations.	27-01-2025 to 20-02-2025	
Unit-3	Mathematical modeling in economics, in medicine, Arms race, Battle, international trade and dynamics through ordinary differential equations. Mathematical modeling through ordinary differential equation of record order.	21-02-2025 to 22-03-2025	Holy Vacations 09-03-2025 to 16-03-2025
Unit-4	Mathematical modeling through difference equations: need, basic theory, economics and finance, population dynamics and Genetics, probability theory and examples.	24-03-2025 to 19-04-2025	
Revision	Revision of the Syllabus	21-04-2025 to Exam	

Unit wise Lesson Plan for Even Semester 2024-25

Department: Mathematics

Name of Teacher:Dr. Priyanka &Manish Gautam   Class: B.Sc.II(H)-4th Sem

Subject: Mathematics   Paper:Operations Research

Unit	Description of Chapter / Topics	Duration	Assignment / Test/Remarks
Unit-1	Definition,scope,methodology and applicationsof OR. Types of OR models. Concept of optimization,Linear Programming: Introduction, Formulation of a Linear Programming Problem (LPP), Requirements for an LPP,Advantage and limitations of LP. Graphical solution: Multiple, unbounded and infeasible solutions.	02-01-2025 to 25-01-2025	
Unit-2	Principle of simplex method:standard form,basic solution, basic feasible solution. Computational Aspect of Simplex Method:Cases of unique feasible solution, no feasible solution, multiple solution and unbounded solution and degeneracy. Two Phase and Big- M methods.	27-01-2025 to 20-02-2025	
Unit-3	Duality in LPP,primal-dual relationship. Transportation Problem: Methods for finding basic feasible solution of a transportation problem, Modified distribution method for finding the optimum solution, Unbalanced and degenerate transportation problems,transhipment problem,maximization in a transportation problem.	21-02-2025 to 22-03-2025	Holy Vacations 09-03-2025 to 16-03-2025
Unit-4	Assignment Problem:Solution by Hungarian method, Unbalanced assignment problem,maximization in an assignment problem, Crew assignment and Travelling salesman problem. GameTheory:Two person zero sum game,Game with saddle points, the rule of dominance;Algebraic,graphical and linear programming methods for solving mixed strategy games.	24-03-2025 to 19-04-2025	
Revision	Revision of the Syllabus	21-04-2025 to Exam	

Unit wise Lesson Plan for Even Semester 2024-25

Department: Mathematics

Name of Teacher:Manish Gautam   Class: B.Sc.II(H)-4th Sem

Subject: Mathematics   Paper:Statics

Unit	Description of Chapter / Topics	Duration	Assignment / Test/Remarks
Unit-1	Composition and Resolution of forces, Parallel forces, Moments and Couples	02-01-2025 to 25-01-2025	
Unit-2	Analytical conditons of equilibrium of coplanar forces, friction, centre of gravity	27-01-2025 to 20-02-2025	
Unit-3	Virtual Work, Forces in three dimension, Poinsots Central Axex	21-02-2025 to 22-03-2025	Holy Vacations 09-03-2025 to 16-03-2025
Unit-4	Wrenches, Null Lines and Null Planes , Stable and Unstable Equilibrium.	24-03-2025 to 19-04-2025	
Revision	Revision of the Syllabus	21-04-2025 to Exam	

Teacher Name: Sh. Baljeet Singh   **Subject:** History
Class: B.A-IInd Sem. 4th   **Department**: History

Unit	Description of chapter/ Topics	Duration	Assignment/Test
Unit – I	Origin and Growth of National Consciousness Formation of Indian National Congress Moderates and Extremists Ideology, Programmes and Politics Rowllet Satyagrah and Home Rule Movement	1st Jan. – 31st Jan., 2025	Assignment -1
Unit –II	Emergence of Mahatma Gandhi Non-Cooperation Movements, Civil-Disobedience Movement and Quit India Movement Ideology and Contribution of Revolutionaries with special reference to Bhagat Singh	1st Feb. – 28th Feb., 2025	Assignment -2
Unit -III	Politics Reforms Acts of 1909 and 1919 Rise of Communal Politics Muslim League-Ideology and Politics Round Table Conference and the Conclusion of Poona Pact Subhash Chandra Bose and Indian National Army Partition and Independence of India	1st March – 31st March, 2025	Test-1
Unit-IV	MAPS: India Places of Importance Sessions of India National Congress Areas and Centers of Civil Disobedience Mevement Important Centers of Revolutionary Movement Areas and Centers of Quit India Movement	1st April – 20th April, 2025	
Revision		Till Exam	

Teacher Name: Sh. Baljeet Singh   **Subject:** History
Class: B.A-Ist Sem. II   **Department**: History

Unit	Description of chapter/ Topics	Duration	Assignment/Test
Unit – I	Meaning of History and Sources of Ancient Indian History Harappan Civilization Origin Extent Urbanization Society Economy and Decline Vedic Age Religion Policy Society and Economy Religious movements Buddhism and Jainism Mahajanapada Rise of Magdha Empire	15st feb – 31st Feb., 2025	Assignment-1
Unit –II	Mauryan Empire Chandragupta Maurya and Ashoka Post Mauryan State Kushanas and Satvahanas Gupta Empire Conquests of Samudragupta and Chandragupta II Administration of Guptas Post Gupta Period Pushpabhuties and Chalukayas	1 March. – 25 March, 2025	Assignment-2
Unit -III	Triangular Struggle for Hegemony of Kannauj Palas Pritiharas and Rashtrakutas Polity and Administration of Cholas Rise of Rajputs with Special Regerence to Tomars Mahmood Ghaznavi and Muhammad Ghori Conflicts with India States and Impact	26 March – 15 Apirl, 2025	Test-1
Unit-IV	Maps : India Important Sites of Harappan Civilization Expansion of Ashoks Empire Expansion of Kanishka Empire Expansion of Harsha Empire	16 April – 30th April, 2025	
Revision		Till Exam	

Lesson Plan
Government College Hansi
2024-25 (Even Semester)

Teacher Name: Sh. Baljeet Singh   **Subject:** History

Class: B.A-IInd Sem. 4th   **Department**: History

Unit	Description of chapter/ Topics	Duration	Assignment/Test
Unit – I	Origin and Growth of National Consciousness Formation of Indian National Congress Moderates and Extremists Ideology, Programmes and Politics Rowllet Satyagrah and Home Rule Movement	1st Jan. – 31st Jan., 2025	Assignment-1
Unit –II	Emergence of Mahatma Gandhi Non-Cooperation Movements, Civil-Disobedience Movement and Quit India Movement Ideology and Contribution of Revolutionaries with special reference to Bhagat Singh	1st Feb. – 28th Feb., 2025	Assignment-2
Unit -III	Politics Reforms Acts of 1909 and 1919 Rise of Communal Politics Muslim League-Ideology and Politics Round Table Conference and the Conclusion of Poona Pact Subhash Chandra Bose and Indian National Army Partition and Independence of India	1st March – 31st March, 2025	Test-1
Unit-IV	MAPS: India Places of Importance Sessions of India National Congress Areas and Centers of Civil Disobedience Mevement Important Centers of Revolutionary Movement Areas and Centers of Quit India Movement	1st April – 20th April, 2025	
Revision		Till Exam	

Lesson Plan
Government College Hansi
2024-25 (Even Semester)

Teacher Name: Sh. Baljeet Singh   **Subject:** History

Class: B.A-Ist Sem. II   **Department**: History

Unit	Description of chapter/ Topics	Duration	Assignment/Test
Unit – I	Meaning of History and Sources of Ancient Indian History Harappan Civilization Origin Extent Urbanization Society Economy and Decline Vedic Age Religion Policy Society and Economy Religious movements Buddhism and Jainism Mahajanapada Rise of Magdha Empire	15st feb – 31st Feb., 2025	Assignment-1
Unit –II	Mauryan Empire Chandragupta Maurya and Ashoka Post Mauryan State Kushanas and Satvahanas Gupta Empire Conquests of Samudragupta and Chandragupta II Administration of Guptas Post Gupta Period Pushpabhuties and Chalukayas	1 March. – 25 March, 2025	Assignment-2
Unit -III	Triangular Struggle for Hegemony of Kannauj Palas Pritiharas and Rashtrakutas Polity and Administration of Cholas Rise of Rajputs with Special Regerence to Tomars Mahmood Ghaznavi and Muhammad Ghori Conflicts with India States and Impact	26 March – 15 Apirl, 2025	Test-1
Unit-IV	Maps : India Important Sites of Harappan Civilization Expansion of Ashoks Empire Expansion of Kanishka Empire Expansion of Harsha Empire	16 April – 30th April, 2025	
Revision		Till Exam	

Lesson Plan
Government College Hansi
2024-25 (Even Semester)

Teacher Name: Sh. Baljeet Singh   **Subject:** History

Class: B.A-IInd Sem. 4ᵗʰ   **Department**: History

Unit	Description of chapter/ Topics	Duration	Assignment/Test
Unit – I	Origin and Growth of National Consciousness Formation of Indian National Congress Moderates and Extremists Ideology, Programmes and Politics Rowllet Satyagrah and Home Rule Movement	1st Jan. – 31st Jan., 2025	Assignment -1
Unit –II	Emergence of Mahatma Gandhi Non-Cooperation Movements, Civil-Disobedience Movement and Quit India Movement Ideology and Contribution of Revolutionaries with special reference to Bhagat Singh	1st Feb. – 28th Feb., 2025	Assignment -2
Unit -III	Politics Reforms Acts of 1909 and 1919 Rise of Communal Politics Muslim League-Ideology and Politics Round Table Conference and the Conclusion of Poona Pact Subhash Chandra Bose and Indian National Army Partition and Independence of India	1st March – 31st March, 2025	Test-1
Unit-IV	MAPS: India Places of Importance Sessions of India National Congress Areas and Centers of Civil Disobedience Mevement Important Centers of Revolutionary Movement Areas and Centers of Quit India Movement	1st April – 20th April, 2025	
Revision		Till Exam	

Lesson Plan
Government College Hansi
2024-25 (Even Semester)

Teacher Name: Sh. Baljeet Singh   **Subject:** History

Class: B.A-Ist Sem. II   **Department**: History

Unit	Description of chapter/ Topics	Duration	Assignment/Test
Unit – I	Meaning of History and Sources of Ancient Indian History Harappan Civilization Origin Extent Urbanization Society Economy and Decline Vedic Age Religion Policy Society and Economy Religious movements Buddhism and Jainism Mahajanapada Rise of Magdha Empire	15st feb – 31st Feb., 2025	Assignment-1
Unit –II	Mauryan Empire Chandragupta Maurya and Ashoka Post Mauryan State Kushanas and Satvahanas Gupta Empire Conquests of Samudragupta and Chandragupta II Administration of Guptas Post Gupta Period Pushpabhuties and Chalukayas	1 March. – 25 March, 2025	Assignment-2
Unit -III	Triangular Struggle for Hegemony of Kannauj Palas Pritiharas and Rashtrakutas Polity and Administration of Cholas Rise of Rajputs with Special Regerence to Tomars Mahmood Ghaznavi and Muhammad Ghori Conflicts with India States and Impact	26 March – 15 Apirl, 2025	Test-1
Unit-IV	Maps : India Important Sites of Harappan Civilization Expansion of Ashoks Empire Expansion of Kanishka Empire Expansion of Harsha Empire	16 April – 30th April, 2025	
Revision		Till Exam	

Government College, Hansi………Unit wise Lesson Plan for the Even Semester, **2024-25**
Name of the Teacher: **Dr. Raj Kumar**
Class: **B.A. 6th Semester**   Subject: **Geography**   Paper: **Theory**

Unit	Description of Chapters/Topics	Duration	Assignment/Test
Unit 1	Introduction to Aerial Photographs: their advantages and types: Elements of Aerial Photo Interpretation	3rd Week of January to 2nd Week of February, 2025	1st Assignment
Unit 2	Basic of Remote Sensing (Electromagnetic Spectrum, Sensors and Platform, Resolution and types); Development of Remote Sensing Technology; Types of Imageries and its use in Natural Resource Management in India	3rd Week of February to 1st Week of March, 2025	
Unit 3	Introduction to Geographical Information System: Definition, Purpose, Advantages and Software & Hardware Requirements; Application of GIS in Various Fields of Geography	2nd Week of March to 1st Week of April, 2025	Class Test
Unit 4	Measures of Central Tendency: Mean, Median and Mode; Measures of Dispersion; Range, Quartile Deviation and Mean Deviation, Standard Deviation, Coefficient of Variation	2nd Week of April to 4th Week of April, 2025	2nd Assignment
Revision	All Four Units	Up to the commencement of examinations	

Government College, Hansi………Unit wise Lesson Plan for the Even Semester, **2024-25**
Name of the Teacher: **Dr. Raj Kumar**
Class: **B.A. 6th Semester**   Subject: **Geography**   Paper: **Practical**

Unit	Description of Chapters/Topics	Duration	Assignment/Test
Unit 1	Demarcation of Principal Point, Conjugate Principal Point and Flightline on Aerial Photographs	2nd Week of January to 1st Week of February, 2025	…..
Unit 2	Demarcation of Scale of Aerial Photographs; Interpretation of Single Vertical Photographs,	2nd Week of February to 4th Week of February, 2025	….
Unit 3	Use of Stereoscope and Identification of Features; Identification of Features on IRSID, LISS III imagery (Mark copy of FCC)	1st Week of March to 3rd Week of March	….
Unit 4	Scio-economic Survey and Report Writing	4th Week of March to 2nd Week of April, 2025	…..

Government College, Hansi

Unit wise Lesson Plan for the Even Semester, 2024-25
Name of the Teacher: Dharmvir
Class: **B.A. 2nd Semester (Sec A & C)**
Subject: **Human Geography (DSC)** Paper: **Theory**

Unit	Description of Chapters/Topics	Duration	Assignment/Test
Unit 1	Introduction: Definition, nature and scope of human geography; Historical perspective of human geography. Approaches to study human geography and contemporary relevance of human geography.	3rd Week of February to 2nd Week of March	1st Assignment in the 1st week of March
Unit 2	Concept of Human-environment relationship: A historical approach, Human adaptation to the environment (i) Eskimo (ii) Bushman (iii) Gujjar Bakarwals of Himalaya. Space and society: cultural regions; race; tribes. Population: population growth and distribution; population composition; Malthusian theory of population growth	3rd Week of March to 2nd Week of April	Minor Test in the 1 Week of April
Unit 3	Population-resource relationships: population-resource regions. Settlements: types of rural settlements; functional classification of urban settlements; trends and patterns of world urbanization. Population pressure and resource use, environment and concept of sustainable development	3rd Week of April to 2nd week of May	2nd Assignment in the 1st Week of May
Revision	Revision, presentation, problem solving	Onwards	…….

Government College, Hansi

Unit wise Lesson Plan for the Even Semester, 2024-25
Name of the Teacher: Dharmvir
Class: **B.A. 6th Semester (Group 4 & 5)**
Subject: **Remote Sensing** Paper: **Practical**

Unit	Description of Chapters/Topics	Duration	Assignment/ Test
Unit 1	1. Demarcation of Principal Point, Conjugate Principal point and Flight line on Aerial Photographs- 1 Exercise. 2. Determination of Scale of Aerial Photographs-1 Exercise.	3rd Week of February to 2nd Week of March	…..
Unit 2	3. Interpretation of Single Vertical Photographs-1 Exercise. 4. Use of Stereoscope and Identification of Features - 1 Exercise.	3rd Week of March to 2nd Week of April	….
Unit 3	5. Identification of Features on IRSID, LISS III imagery (Mark copy of FCC) -1 Exercise. Socio-economic Survey and Report Writing -15 marks. Field Survey Report = 10 marks.	3rd Week of April to 2nd week of May	….
Revision	Revision, Problem Solving & Quizzes	Onwards	…….

Government College, Hansi

Unit wise Lesson Plan for the Even Semester, 2024-25
Name of the Teacher: Dharmvir
(VAC) Value Added Course
Class: **BA/BCA/B.com/B.Sc/B.Sc (Hons)**   Subject: **EVS (Sec C & D)**
Paper: **Environmental Studies**

Unit	Description of chapters/topics	Duration	Assignment/Test
Unit 1	Multidisciplinary nature of environmental studies: Definition, scope and importance, need for public awareness, Concept, structure and function of ecosystem: producers, consumers and decomposers, Energy flow in the ecosystem. Ecological succession, Food chains, Food webs and ecological pyramids,	3rd Week of February to 4th Week of March	1st Assignment in the Last week of March
Unit 2	Biodiversity and its Conservation: Introduction: Bio-geographical classification of India, Value of Biodiversity. India as a mega diversity nation.Hot spot of biodiversity, threats to biodiversity, Conservation of biodiversity: In-situ and ex-situ conservation of biodiversity	1st Week of April to 1st Week of May	Minor Test in the Last Week of April
Revision	Revision, presentation, problem solving	Onwards	…….

Government College, Hansi

Unit wise Lesson Plan for the Even Semester, 2024-25
Name of the Teacher: Dharmvir
Class: **B.A. 2nd Semester**
Subject: **Interpretation of Maps and Toposheets (SEC)** Paper: **Theory**

Unit	Description of Chapters/Topics	Duration	Assignment/Test
Unit 1	Maps; History, Meaning, Definition and Basic concepts of Maps, Techniques of Map- making, Reduction and Enlargement of Maps, Classification and uses of Map. Distribution Maps; Meaning, Definition and Classification. Techniques of thematic mapping: Chorochromatic, Choroschematic, Choropleth, Isopleth, Dot method and Diagrammatic Methods.	3rd Week of February to 4th Week of March	1st Assignment in the Last week of March
Unit 2	Toposheet Maps; History, Meaning and Classification, Toposheets maps of Indiaand neighborhood countries. Basic information on Topographical sheets, Preliminary information, ConventionalSigns, Interpretation of Relief, Drainage, Settlements, Land-use, Vegetation and Transport network on toposheets. Uses of Toposheets in various field.	1st Week of April to 1st Week of May	Minor Test in the Last Week of April
Revision	Revision, presentation, problem solving	Onwards	…….

Government College, Hansi

Unit wise Lesson Plan for the Even Semester, 2024-25
Name of the Teacher: Dharmvir
Class: **B.A. 2nd Semester**
Subject: **Interpretation of Maps and Toposheets (SEC)** Paper: **Practical**

Unit	Description of Chapters/Topics	Duration	Assignment/Test
Unit 1	1. Reduction and Enlargement of Maps. (2 Exercises) 2. Distribution maps; Choropleth Method (1 Exercise) 3. Distribution maps; Dot Method (1 Exercise) 4. Distribution maps; Isopleth Method (1 Exercise)	3rd Week of February to 4th Week of March	1st Assignment in the Last week of March
Unit 2	5. Distribution maps; Diagrammatic Methods (1 Exercise) 6. Conventional Signs and symbols on Toposheets (1 Exercise) 7. Contours line and drainage pattern on Toposheets (1 Exercise) 8. Land Uses on Toposheets (2 Exercises)	1st Week of April to 1st Week of May	Minor Test in the Last Week of April
Revision	Revision, presentation, problem solving	Onwards	…….

Government College, Hansi
Unit wise Lesson Plan for the Even Semester, 2024-25

Name of the Teacher: Sh. JITIN

Class: B.A. 4th Semester   Subject: Geography   Paper: Theory

Unit	Description of Chapters/Topics	Duration	Assignment/Test
Unit 1	Nature and scope of human geography, Branches of human Geography, Approaches to the study of Human Geography. Division of Mankind, Spatial distribution of race and tribes of India, concept of men-environment relation.	1st Week of January to 3rd Week of January	1st Assignment in the third Week of January
Unit 2	Human adaptation to the environment, Cold region- Eskimo, Hot region- Bushman, Plateau- Gonds, Mountains- Gujjars. Meaning, Nature and components of resoures, Classification of resources, Distribution, utilization of biotic and abiotic resources.	4th Week of January to 4th Week of February	Minor Test in the Last Week of February
Unit 3	Distribution and density of world population, population growth, fertility and mortality patterns. Concepts of over, under and optimum population, Population theories, Maltus, Ricardo and Marx.	1st Week of March to 2nd Week of March	2nd Assignment in the Last Week of March
Unit 4	Rural settlements, Meaning, classification and types, Urban settlements, Origin, classification and functions of towns. Population pressure, resorce use and environment degradation, sustainable development, cocept of deforestation, soil erosion, air and water pollution	3rd Week of March to 3rd Week of April	…..
Revision	Revision, Problem Solving & Quizzes	Last Week of April to end of the semester	…..

Government College, Hansi
Unit wise Lesson Plan for the Even Semester, 2024-25

Name of the Teacher: Sh. JITIN

Class: B.A. 4th Semester   Subject: Geography   Paper: Practical

Unit	Description of Chapters/Topics	Duration	Assignment/ Test
Unit 1	Introduction to Map Projection, Meaning, classification and importance. Cylindrical Projections, Characteristics, applications and drawing	1st Week of January to 4th Week of January	…..
Unit 2	Conical Projections, Characteristics, application and drawing.	1st Week of February to 4th Week of February	….
Unit 3	Zenithal Projections, Characteristics, application and drawing. Characteristics, applications and drawings of Sinosoidal and Mollweide Projections.	1st Week of March to 3rd Week of March	….
Unit 4	Plane Table Survey.	4th Week of March to 2nd Week of April	…..
Revision	Revision, Problem Solving & Viva Preparation	3rd Week of April to Commencement of Exams	…..

Government College, Hansi
Unit wise Lesson Plan for the Even Semester, 2024-25

Name of the Teacher: Sh. Virender Sihag

Class: B.A. 4th Semester   Subject: Geography   Paper: Theory

Unit	Description of Chapters/Topics	Duration	Assignment/Test
Unit 1	Nature and scope of human geography, Branches of human Geography, Approaches to the study of Human Geography. Division of Mankind, Spatial distribution of race and tribes of India, concept of men-environment relation.	1st Week of January to 3rd Week of January	1st Assignment in the third Week of January
Unit 2	Human adaptation to the environment, Cold region- Eskimo, Hot region- Bushman, Plateau- Gonds, Mountains- Gujjars. Meaning, Nature and components of resoures, Classification of resources, Distribution, utilization of biotic and abiotic resources.	4th Week of January to 4th Week of February	Minor Test in the Last Week of February
Unit 3	Distribution and density of world population, population growth, fertility and mortality patterns. Concepts of over, under and optimum population, Population theories, Maltus, Ricardo and Marx.	1st Week of March to 2nd Week of March	2nd Assignment in the Last Week of March
Unit 4	Rural settlements, Meaning, classification and types, Urban settlements, Origin, classification and functions of towns. Population pressure, resorce use and environment degradation, sustainable development, cocept of deforestation, soil erosion, air and water pollution	3rd Week of March to 3rd Week of April	…..
Revision	Revision, Problem Solving & Quizzes	Last Week of April to end of the semester	…..

Government College, Hansi
Unit wise Lesson Plan for the Even Semester, 2024-25

Name of the Teacher: Sh. Virender Sihag

Class: B.A. 4th Semester   Subject: Geography   Paper: Practical

Unit	Description of Chapters/Topics	Duration	Assignment/ Test
Unit 1	Introduction to Map Projection, Meaning, classification and importance. Cylindrical Projections, Characteristics, applications and drawing	1st Week of January to 4th Week of January	…..
Unit 2	Conical Projections, Characteristics, application and drawing.	1st Week of February to 4th Week of February	….
Unit 3	Zenithal Projections, Characteristics, application and drawing. Characteristics, applications and drawings of Sinosoidal and Mollweide Projections.	1st Week of March to 3rd Week of March	….
Unit 4	Plane Table Survey.	4th Week of March to 2nd Week of April	…..
Revision	Revision, Problem Solving & Viva Preparation	3rd Week of April to Commencement of Exams	…..

GOVERNMENT COLLEGE, HANSI LESSON PLAN

CLASS: BA (Fourth Semester)
NAME OF TEACHER: DR. HONEY SETHI   SUBJECT: ENGLISH

UNITS	TIME PERIOD	TOPICS	TESTS AND ASSIGNMENTS	REMARKS
	01 JAN. - 10 JAN.	Play-1 With Exercise &Grammar		
	11 JAN.-05FEB.	Play-2 With Exercise & Grammar	Assignment 1	
	06 FEB. – 31 MAR.	Play-3 With Exercise &Grammar	Test	
	01APR.-11APR.	Play-4 With Exercise &Grammar	Assignment 2	
	12APR.-20APR. 21 APR-Till Exam.	Play-5 With Exercise &Grammar **Revision**		

DRAMA	TIME PERIOD	TOPICS	TESTS AND ASSIGNMENTS	REMARKS
THE MERCHANT OF VENICE	01 JAN-31 JAN.	In detail : ACT-1 With a topic of Grammar		
	01 FEB. - 29 FEB.	In detail : ACT-2 With a topic of Grammar	Assignment 1	
	01MAR. - 15MAR.	In detail : ACT-3 With a topic of Grammar	Test	
	16 MAR. - 31 MAR.	In detail : ACT-4 With a topic of Grammar	Assignment2	

DRAMA	TIME PERIOD	TOPICS	TESTS AND ASSIGNMENTS	REMARKS
	01 APR. - 20 APR.	In detail : ACT-5 With a topic of Grammar		
	21APR.-Till Exam.	**Revision**		

Government College Hansi
Unit wise Lesson Plan for Odd Semester, 2024-25

Name of Teacher: **Bhateri**   Class: **B.A. 6th Semester**

Subject: **Economic Development & Policy in India**   Paper: **Theory**

Unit	Description of Chapter/Topic	Duration	Assignment/Test
Unit 1	Features of Indian Economy since Independence and colonial rule, Trends in National Income, Sectorial Composition, Economics Development under policy regimes	3rd week of March	Verbal Test
Unit 2	Demographic Features of Indian Population and National Population policy, Human Development Indicators	4th week of March to 1st week of April	1st Assignment in 1st week of April
Unit 3	Trends in Saving and Investment, Problem of Poverty and Unemployment in India, Income and Regional Inequalities, Sustainable Development	2nd week of April to 3rd week of April	Class test of 1st week of April
Unit 4	New Economy Policy, Industrial Policy, Disinvestment and Financial Sector Reforms and Banking Reforms.	4th week of April	2nd Assignment in the 4th week of April
Revision	Revision, problem solving	1st week of May	

Head of the Department (Economics)

Lesson Plan
Government College, Hansi
Unit wise Lesson Plan for Even Semester 2024-2025
Department Of Economics

Name of Teacher: Ms. Bhateri Class: B.A 2nd semester

Subject: Economics Paper: Microeconomics

Unit	Description of Chapter / Topics	Duration	Assignment / Test
Unit-1	Structure of Market:-Perfect Competition Market, Equilibrium of Firm and Industry, Price And quantity determinent of Firm and Industry under Perfect Competition Market,	3rd week of March to 4th week of March	
Unit-2	Monopoly Market :-Firm Equilibrium and Price Determinent under Monopoly Market	1st week of April to 2nd Week of April	1st Assignment in 1st week of April
Unit-3	Monopolistic Competition, Oligopoly Market.	3rd week of April to 4th week April	Class test 4th week of April
Unit-4	Determinant of Factors Income:-Wages, Rent, Interest	1st week of May to 2nd week of May	2nd Assignment and 2nd Class Test
Revision	Revision and problem solving	-------	

Lesson Plan
Government College, Hansi
Unit wise Lesson Plan for Even Semester 2024-25
Department of Economics

Name of Teacher: Ms Bhateri   Class: B.A 4th Semester
Subject: Economics   Paper: Principal Of Macroeconomics

Unit	Description of Chapter / Topics	Duration	Assignment / Test
Unit-1	IS LM Analysis:- Derivation of IS, LM function, IS-LM and Aggregate Demand, Shift of IS, LM curve	3rd week of March	--
Unit-2	Inflection and theories, Cost push and Demand Pull Inflection, Relationship between Inflation and Unemployment, Phillips Curve in Short and Long run.	4th week of March	Class test
Unit-3	Tread Cycle:Meaning, Phases, Samuelson and Hicks Model, Monetary and Fiscal Policies for Stablization	1st week of April to 2nd week of April	Assignment-1st in 2nd week of April
Unit-4	Balance of Payment and Exchange Rate	3rd and 4th week of April	Verbal test and 2 nd assignment
Revision	Revision and problem solve	1st and 2nd week or May	

Lesson Plan
Government College, Hansi
Unit wise Lesson Plan for Even Semester 2024-25

Department: Chemistry

Name of Teacher: Renu Rani   Class: B.Sc. 4th sem NM

Subject: Chemistry   Paper: Inorganic Chemistry (CCL-404)

Unit	Description of Chapter / Topics	Schedule/ Duration	Assignment / Test
Unit-1	**Transition Elements -** General group trends with special reference to electronic configuration, variable valency, colour, magnetic and catalytic properties, ability to form complexes and stability of various oxidation states (Latimer diagrams) for Mn, Fe and Cu.	1st Week of January-3rd week of Jan	1st Assignemnt-3rd week of Jan Teat- 4th Week of Jan
Unit-2	*Lanthanoids and actinoids –* Electronic configurations, oxidation states, colour, magnetic properties, lanthanide contraction, separation of lanthanides (ion exchange method only).	4th Week of January-2nd Week of Feb	Test-3rd Week of Feb
Unit 3	*Coordination Chemistry–* Valence Bond Theory (VBT): Inner and outer orbital complexes of Cr, Fe, Co, Ni and Cu (coordination numbers 4 and 6). Structural and stereoisomerism in complexes with coordination numbers 4 and 6. Drawbacks of VBT.IUPAC system of nomenclature.	3rd Week of Feb-2nd Week of March	Assignment-2nd Week of March Test- 3rd Week of March
Unit-4	*Crystal Field Theory–*Crystal field effect, octahedral symmetry. Crystal field stabilization energy (CFSE), Crystal field effects for weak and strong fields. Tetrahedral symmetry. Factors affecting the magnitude of d-orbital splitting. Spectrochemical series. Comparison of CFSE for O_h and T_d complexes, Tetragonal distortion of octahedral geometry. Jahn-Teller distortion, Square planar coordination.	3rd Week of March-2nd Week of April	Test- 2nd Week of April
Revision	Problems and revision of all 4 units	3rd & 4th week of April	

Lesson Plan
Government College, Hansi
Unit wise Lesson Plan for Even Semester 2024-25

Department: Chemistry

Name of Teacher: Renu Rani Class: B.Sc. 4th sem NM
Subject: Chemistry Paper: Physical Chemistry (CCL-405)

Unit	Description of Chapter / Topics	Schedule/ Duration	Assignment / Test
Unit-1	*Kinetic Theory of Gases* Postulates of Kinetic Theory of Gases and derivation of the kinetic gas equation. Deviation of real gases from ideal behavior, compressibility factor, causes of deviation. Van der Waals equation of state for real gases. Boyle temperature (derivation not required). Critical phenomena, critical constants and their calculation from van der Waals equation. Andrews's isotherms of CO_2. Maxwell Boltzmann distribution laws of molecular velocities and molecular energies (graphic representation – derivation not required) and their importance. Temperature dependence of these distributions. Most probable, average and root mean square velocities (no derivation). Collision cross section, collision number, collision frequency, collision diameter and mean free path of molecules	1st Week- 4th week of January	1st Assignemnt- 3rd week of Jan Teat- 4th Week of Jan
Unit-2	**Liquids** Surface tension and its determination using stalagmometer. Viscosity of a liquid and determination of coefficient of viscosity using Ostwald viscometer. Effect of temperature on surface tension and coefficient of viscosity of a liquid (qualitative treatment only).	1st Week - 3rd Week of Feb	Test-3rd Week of Feb
Unit 3	*Solids* Forms of solids. Symmetry elements, unit cells, crystal systems, Bravais lattice types and identification of lattice planes. Laws of Crystallography - Law of constancy of interfacial	4th Week of Feb-2nd Week of March	Assignment-2nd Week of March Test- 3rd Week of March

	angles, Law of rational indices. Miller indices. X–Ray diffraction by crystals, Bragg's law. Structures of NaCl, KCl and CsCl (qualitative treatment only).Defects in crystals.		
Unit-4	***Chemical Kinetics*** The concept of reaction rates. Effect of temperature, pressure, catalyst and other factors on reaction rates. Order and molecularity of a reaction. Derivation of integrated rate equations for zero, first and second order reactions (both for equal and unequal concentrations of reactants).Half–life of a reaction. General methods for determination of order of a reaction. Concept of activation energy and its calculation from Arrhenius equation. Theories of Reaction Rates: Collision theory and Activated Complex theory of bimolecular reactions. Comparison of the two theories (qualitative treatment only).	3rd Week of March-2nd Week of April	Test- 2nd Week of April
Revision	Problems and Revision	3rd & 4th week of April	

Renu Rani
Assistant Professor of Chemistry

Lesson Plan
Government College, Hansi
Unit wise Lesson Plan for Even Semester 2024-25

Department: Chemistry

Name of Teacher: Renu Rani   Class: B.Sc.2nd Sem Physical Sciences
Subject: Chemistry   Paper: Chemistry – II (C24CHE201T)

Unit	Description of Chapter / Topics	Schedule/ Duration	Assignment / Test
Unit-1	Covalent Bond Valence bond theory approach, Various type of hybridization and shapes of simple inorganic molecules and ions with suitable examples of linear, trigonal planar, square planar, tetrahedral, trigonal bipyramidal and octahedral arrangements (BeF_2, BF_3, CH_4, PF_5, SF_6, IF_7, SO_4^{2-}, ClO_4^-, NO_3^-), Valence Shell Electron Pair Repulsion (VSEPR) theory to NH_3, H_3O_+, SF_4, ClF_3, H_2O, $SnCl_2$, ClO_3^- and ICl_2^-.	3rd week of Feb- 1st week of March	**Assignment 1**- 1st Week of March
Unit-2	**Alkanes** Nomenclature, Classification of carbon atoms in alkanes and its structure. Isomerism in alkanes. Methods of Preparation: Wurtz reaction, Corey-House reaction, Kolbe electrolytic reaction, and decarboxylation of carboxylic acids. Mechanism of free radical halogenation of alkanes: reactivity and selectivity. **Alkenes** Nomenclature of alkenes and its structure. Methods of Preparation: dehydration of alcohols and dehydrohalogenation of alkyl halide with mechanism. The Saytzeff rule and relative stabilities of alkenes. Chemical reactions: electrophilic and free radical additions: addition of halogens, halogen acids,	2nd week of March -4th week of March	**Test-** 2nd week of March

	hydroboration–oxidation, ozonolysis. **Alkynes** Nomenclature, structure and bonding. Methods of Preparation: From Calcium carbide and from acetylene, Chemical reactions: Acidity of terminal alkynes, Cause of acidity, Reactivity of alkenes versus alkynes towards electrophilic addition reaction.		
Unit 3	**Chemical Kinetics** Concept of reaction rates, Rate equation, Rate law, Law of mass action, Factors influencing the rate of reaction, Order and molecularity of a reaction, Derivation of Integrated rate expression for zero, first and second order reaction (for equal concentration of reactants), Half-life period of a reaction, Methods of determination of order of a reaction, Concept of Activation Energy and its calculation from Arrhenius equation.	1st week of April – 3rd week of April	**Assignment 2**-4th week of March **Test**-2nd Week of April
Unit-4	**Thermodynamics** Definition of various thermodynamic terms: Types of systems, Intensive and Extensive properties. State and path functions. Thermodynamic process. Thermodynamic equilibrium, First law of thermodynamics: concepts of internal energy and enthalpy. Heat capacity, heat capacities at constant volume and pressure and their relationship. Second law of thermodynamics, Carnot's cycle and its efficiency, Carnot's theorem. Gibbs function (G) and Helmholtz function (A), G as criteria for thermodynamic equilibrium and spontaneity. Concept of entropy. Third law of thermodynamics: Nernst heat theorem, concept of residual entropy.	4th week of April – 2nd week of May	**Test**- 3rd week of May
Revision	Problems and Revision of all 4 units	3rd & 4th week of May	

Renu Rani
Assistant Professor of Chemistry

Lesson Plan
Government College, Hansi
Unit wise Lesson Plan for Even Semester 2024- 25

Department: Chemistry

Name of Teacher: Priyanka Punia   Class: B.A. Ist
Subject: MDC   Paper: Chemistry of Soil and Everyday Compounds

Unit	Description of Chapter / Topics	Duration	Remarks
Unit-1	Soil and fertilizers Types of soils, Acidity and alkalinity of soil and its determination. Types of fertilizers- Chemical and Biofertilizers with examples.	17-02-2025 to 08-03-2025	
Unit-2	Preparation, properties and uses of some common compounds Baking soda, Baking powder, Washing soda, Plaster of Paris, Gypsum, Glass.	17-03-2025 to 30-03-2025	Test
			Assignment
	Revision of the Syllabus	01-04-2025-15-04-2025	

Lesson Plan
Government College, Hansi
Unit wise Lesson Plan for Even Semester 2024- 25

Department: Chemistry

Name of Teacher: Priyanka Punia   Class: B. Sc 3rd NM
Subject: Chemistry   Paper: Spectroscopy and Photochemistry

Unit	Description of Chapter / Topics	Duration	Remarks
Unit-1	Molecular Spectroscopy: Interaction of electromagnetic radiation with molecules and various types of spectra; Born- Oppenheimer approximation. Rotation spectroscopy: Selection rules, intensities of spectral lines, determination of bond lengths of diatomic and linear triatomic molecules, isotopic substitution. Vibrational spectroscopy: Classical equation of vibration, computation of force constant, amplitude of diatomic molecular vibrations, anharmonicity, Morse potential, dissociation energies, fundamental frequencies, overtones, hot bands, degrees of freedom for polyatomic molecules, modes of vibration, concept of group frequencies. Vibration-rotation spectroscopy: diatomic vibrating rotator, P, Q, R branches.	17-02-2025 to 27-02-2025	
Unit-2	Raman spectroscopy: Qualitative treatment of Rotational Raman effect; Effect of nuclear spin, Vibrational Raman spectra, Stokes and anti-Stokes lines; their intensity difference, rule of mutual exclusion. Electronic spectroscopy: Franck-Condon principle, electronic transitions, singlet and triplet	28-02-2025 to 08-03-2025	Test

	states, fluorescence and phosphorescence, dissociation and predissociation, calculation of electronic transitions of polyenes using free electron model.		
Unit-3	Nuclear Magnetic Resonance (NMR) spectroscopy: Principles of NMR spectroscopy, Larmor precession, chemical shift and low resolution spectra, different scales, spinspin coupling and high resolution spectra, interpretation of PMR spectra of organic molecules. Electron Spin Resonance (ESR) spectroscopy: Its principle, hyperfine structure, ESR of simple radicals. Photochemistry Characteristics of electromagnetic radiation, Lambert-Beer's law and its limitations, physical significance of absorption coefficients. Laws, of photochemistry, quantum yield, actinometry, examples of low and high quantum yields, photochemical equilibrium and the differential rate of photochemical reactions, photosensitised reactions, quenching. Role of photochemical reactions in biochemical processes, photostationary states, chemiluminescence.	17-03-2025 to 30-03-2025	Assignment
Unit-4	☐Revision of the Syllabus	01-04-2025-15-04-2025	

Lesson Plan
Government College, Hansi
Unit wise Lesson Plan for Even Semester 2024- 25

Department: Chemistry

Name of Teacher: Priyanka Punia   Class: B. Sc 3rd NM

Subject: Chemistry   Paper: Polynuclear Hydrocarbons and U.V IR Spectroscopy

Unit	Description of Chapter / Topics	Duration	Remarks
Unit-1	Polynuclear and heteronuclear aromatic compounds: Properties of the following compounds with reference to electrophilic and nucleophilic substitution: Naphthalene, Anthracene, Furan, Pyrrole, Thiophene, and Pyridine.	17-02-2025 to 27-02-2025	
Unit-2	Active methylene compounds: Preparation: Claisen ester condensation. Keto-enoltautomerism. Reactions: Synthetic uses of ethyl acetoacetate (preparation of non-hetero molecules having upto 6 carbon).	28-02-2025 to 08-03-2025	Test
Unit-3	Application of Spectroscopy to Simple Organic Molecules Application of visible, ultraviolet and infrared spectroscopy in organic molecules. Electromagnetic radiations, electronic transitions, λmax&εmax, chromophore, auxochrome, bathochromic and	17-03-2025 to 30-03-2025	Assignment

	hypsochromic shifts. Application of electronic spectroscopy and Woodward rules for calculating λmax of conjugated dienes and α,β-unsaturated compounds.		
Unit-4	Infrared radiation and types of molecular vibrations, functional group and fingerprint region. IR spectra Of alkanes, alkenes and simple alcohols (inter and intramolecular hydrogen bonding), aldehydes, Ketones, carboxylic acids and their derivatives (effect of substitution on >C=O stretching absorptions). ◻Revision of the Syllabus	01-04-2025-15-04-2025	

Lesson Plan
Government College, Hansi
Unit wise Lesson Plan for Even Semester 2024- 25

Department: Chemistry

Name of Teacher: Priyanka Punia   Class: B. Sc 3rd NM
Subject: Chemistry   Paper: Quantum Chemistry

Unit	Description of Chapter / Topics	Duration	Remarks
Unit-1	Postulates of quantum mechanics, quantum mechanical operators, Schrödinger equation and its application to free particle and "particle-in-a-box" (rigorous treatment), quantization of energy levels, zero-point energy and Heisenberg Uncertainty principle; wavefunctions, probability distribution functions, nodal properties, Extension to two and three dimensional boxes, separation of variables, degeneracy.	17-02-2025 to 27-02-2025	
Unit-2	Qualitative treatment of simple harmonic oscillator model of vibrational motion: Setting up of Schrödinger equation and discussion of solution and wave functions. Vibrational energy of diatomic molecules and zero-point energy. Angular momentum: Commutation rules, quantization of square of total angular momentum and z- component. Rigid rotator model of rotation of diatomic molecule.Schrödinger equation.	28-02-2025 to 08-03-2025	Test
Unit-3	Qualitative treatment of hydrogen atom and hydrogen-like ions: setting up of Schrödinger equation in spherical polar coordinates, radial part, quantization of energy (only final energy expression). Average	17-03-2025 to 30-03-2025	Assignment

	and most probable distances of electron from nucleus. Setting up of Schrödinger equation for many-electron atoms (He, Li). Need for approximation methods. Statement of variation theorem and application to simple systems (particle-in-a-box, harmonic oscillator, hydrogen atom).		
Unit-4	Chemical bonding: Covalent bonding, valence bond and molecular orbital approaches, LCAO-MO Treatment of H2 + . Bonding and antibonding orbitals.Qualitative extension to H2. Comparison of LCAO- MO and VB treatments of H2 (only wavefunctions, detailed solution not required) and their limitations. Refinements of the two approaches (Configuration Interaction for MO, ionic terms in VB).Qualitative Description of LCAO-MO treatment of homonuclear and heteronuclear diatomic molecules (HF, LiH). ☐Revision of the Syllabus	01-04-2025-15-04-2025	

Lesson Plan.

Government College Hansi (Even Sem) 2024-2025.

History Deptt.   Prof. Kishan Pal.   Class B.A. III (6th Sem)

Chapter/Topics.	Duration	Assign/Test

Unit-I

1. American Revolution: Causes and Impact,   01 Jan to 31 Jan.   Ist
2. French Revolution Nature and Impact.
3. Growth of Liberalism in England.

Unit-II

4. Rise of Imperialism: Causes and Consequences.
5. World War-I: Causes and Consequence.   01 Feb. to 28 Feb.   Test
6. Paris peace Settlement and its Consequences.

Unit-III

7. Rise of Socialism and Russian Revolution.
8. Rise of Dictatorship: Nazism and fascism.   01 March to 05th April   IInd
9. World War-II Causes and Consequences.

Unit-IV (Maps)   05th April to 20th April   Test

Kishan Pal.
Asso. Prof of History
GC Hansi

Lesson Plan (History Deptt.)
Govt. College Hansi (Even Sem) 2024-25. BA II-A (4th Sem)

Chapter/Topics.	Duration	Assign/Test

Unit-I

1. Origin of the National Consciousness
2. Founding of Indian National Congress and Moderates.
3. Extremists: Ideology, Programmes and Politics.
4. Home Rule Movement.

01 Jan to 31 Jan.   Ist

Unit-II

5. Role of Mahatma Gandhi in freedom Movement, Non Co-operation, Civil Dis. Obed and quit India Movement.

01 Feb to 28 Feb.   Test

6. Ideology and Contribution of Revolutionaries with Special ref. to Bhagat Singh.
7. SC Bose and INA.

Unit-III

8. Political Reforms Act 1909 and 1919.
9. Rise of Communal Politics: Muslim League. Ideology and Politics.
10. Poona Pact and Act of 1935.
11. Partition and Independence of India.

01 March to 05 April.   IInd

Unit-IV Maps

05 April to 20 April   Test.

Kishan Pal.
Asso Prof of History
GC Hansi

राष्ट्र कर्त्तव्य को विकीर्णित करने की कला है।
... मानोरंजन नहीं बल्कि चरित्र को उच्च भी बनाया
जा सकता है।

खेल में खेल के लेने का महत्व है बताया।

युवा पीढ़ी को चाहे कि वे रेल-कूद से अपनी ऊर्जा बढ़ाएं।
बुरी आदतों को छोड़ने का आह्वान करें। हार-जीत की भावना
से ऊपर उठते हुए खेल भावना से खेलों में भाग लें।

प्रत्येक खेल में आए मुख्य अतिथि का स्वागत के कार्यक्रम
किया गया। तथा महाविद्यालय के विद्यार्थियों को नियमों का
पालन करते हुए खेल-कूद प्रतियोगिता में बढ़-चढ़कर भाग लेने
को प्रेरित किया।

अन्त में
डॉ० हेम DHEO Hisar व Principal GC Nalwa ने
द्वारा दिल्ल लोके महाविद्यालय की पहली वार्षिक खेल-कूद
प्रतियोगिता का शुभारंभ किया।