**Lesson Plan 2023-24**

**Government College, Hansi**

**Unit wise Lesson Plan for Even Semester Jan-April-2024**

**Department: Computer Science**

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

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

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| **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-24  22-Jan-24 | 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-24  To  15-Feb-24 | 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-24  To  08-March-24 | 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-2024  To  31-March-2024 | Mock Test |
| **Revision** | Revision of Syllabus and Students Query Handling with Sample Papers | 01-April 2024 to Exam Date |  |

Name of Teacher: **Dr. Banta Singh Jangra / Mrs Uma Sharma**

Class: **PGDCA (2ndSem.)** Subject: **Computer Networks**Paper: **PGDCA-202**

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| **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-24  22-Jan-24 | 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-24  To  15-Feb-24 | 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-24  To  08-March-24 | 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-2024  To  31-March-2024 | Mock Test |
| **Revision** | Revision of Syllabus and Students Query Handling with Sample Papers | 01-April 2024 to Exam Date |  |

**Government College, Hansi**

**Unit wise Lesson Plan for Even Semester 2023-24**

Department: **Computer Science**

Name of Teacher: **Anil Kumar** Class: **BCA-I**

Subject: **Operating System** Paper: **BCA-PC(L)-124**

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| **Unit** | **Description of Chapter / Topics** | **Duration** | **Assignment / Test** |
| **Unit-1** | Introduction: Introduction to Operating System Concepts (Including Multitasking, Multiprogramming, Multi User, Multithreading etc.), Types of Operating Systems: Batch Operating System, Time-Sharing System, Distributed Operating System, Network Operating System, Real Time Operating System, Various Operating System services, architecture, System Programs and Calls | 01-01-24 To  31-01-24 | Assignment 1 |
| **Unit-2** | Process Management: Process Concept, Process Scheduling, Operations on Processes; CPU Scheduling, Scheduling Criteria, Scheduling Algorithms- First come First Serve(FCFS), ShortestJob- First (SJF), Priority Scheduling, Round Robin(RR). Deadlock: Methods for handling deadlock- Deadlock prevention, Avoidance & Detection. | 01-02-24  To  25-02-24 | Test 1 |
| **Unit-3** | Memory Management: Logical & Physical Address Space, Swapping, Contiguous Memory allocation, non-contiguous memory allocation paging and segmentation techniques; Virtual Memory Management- Demand Paging & Page Replacement Algorithm; Demand Segmentation. | 26-02-24  To  21-03-24 | Assignment 2 |
| **Unit-4** | File System: Different types of files and their access methods, directory structures, various allocation methods, disk scheduling and management and its associated algorithms. | 26-03-24  To  20-04-24 |  |
|  | **Revision** | 21-04-24 onward | Test 2 |

**Name of Teacher: Anil Kumar Class: PGDCA**

**Subject: Operating System Paper: PGDCA-103**

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| **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. | 01-01-24 To  31-01-24 | 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, othersXOR, XNOR. | 01-02-24  To  25-02-24 | Test 1 |
| **Unit-3** | Combinational Logic: Design Procedure, Adders, Subtractors, Encoders, Decoders, Multiplexers and De-multiplexers. Sequential Logic: Flip-flops, Registers and Counters. | 26-02-24  To  21-03-24 | 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. | 26-03-24  To  20-04-24 |  |
| **Revision** |  | 21-04-24 onward | Test 2 |

**Government College, Hansi**

**Unit wise Lesson Plan for Even Semester 2nd January to 30th April 2024**

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

Class: **BCA-Ist( IInd Sem.)** Subject: **Management Information System**

Paper: **BCA-PC(L) -125 (Theory)**

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| **Unit** | **Description of Chapter / Topics** | **Duration** | **Assignment / Test** |
| **Unit-1** | Introduction to System and Basic System Concepts, Types of Systems, The Systems Approach, Information System: Definition & Characteristics, Types of information, Role of Information inDecision-Making. | 2nd January to  20th January | Assignment-1 |
| **Unit-2** | An overview of Management Information System: Definition & Characteristics, Components ofMIS, Framework for Understanding MIS: Information requirements & Levels of Management, Simon’s Model of decision-Making, Structured Vs Unstructured decisions, Formal vs. InformalSystems | 21stJanuary  to  20th February | Test-1 |
| **Unit-3** | Developing Information Systems: Analysis & Design of Information Systems, Implementation &Evaluation, Pitfalls in MIS Development. | 22nd February  to  22nd March | Assignment-2 |
| **Unit-4** | Functional MIS: A Study of Personnel, Financial and Production MIS, Introduction to E-BusinessSystems, E-Commerce- Technologies, Applications, Decision Support Systems- Support Systemsfor Planning, Control and Decision- Making. | Ist April to 20th April | Test-2 |
| **Revision** |  | 21stApril to Exam Date |  |

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

Class: **BA-IInd ( IV Sem.)** Subject: Software Engineering

Paper: **BACS-204 (Theory)**

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| **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 January to  20th January | 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 | 21st January  to  20th February | 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. | 22nd February  to  22nd 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. | Ist April to 20th April | Test-2 |
| **Revision** |  | 21st April to Exam Date |  |

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

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

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

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| **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 January to  20th January | 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. | 21st January  to  20th February | 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. | 22nd February  to  22nd 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. | Ist April to 20th April | Test-2 |
| **Revision** |  | 21st April to Exam Date |  |

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

Class: **PGDCA-IInd Sem.** Subject: **Software Engineering**

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

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| **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 January to  20th January | 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 | 21st January  to  20th February | 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. | 22nd February  to  22nd 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. | Ist April to 20th April | Test-2 |
| **Revision** |  | 21st April to Exam Date |  |

**Lesson Plan**

**Government College Hansi**

Unit wise Lesson Plan Even Semester **January-May, 2023-24**

Teacher Name: **Dr. Anju Jain**

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

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

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| **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 31stJanuary 2024 | 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 2024 | 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. | 29thFebruary to 22nd March 2024 | 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 2024 | Quiz |
| **Revision** | Revision of Syllabus and Students Query Handling | 22nd April  to  Sem End Exam 2024 | Presentation |

Teacher Name: **Dr. Anju Jain**

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

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

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| **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 2024 | 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. | 1stFebruary  to 28th February 2024 | 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. | 29th February to 22nd March 2024 | 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 2024 | Quiz |
| **Revision** | Revision of Syllabus and Students Query Handling | 22nd April to Sem End Exam 2024 | Presentation |

**Lesson Plan**

**Government College, Hansi**

Unit wise Lesson Plan **Even Semester Jan. – April, 2024**

Name of Teacher:**Ms. Priyanka**

Class: **BCA-II (4thSem.)** Subject**:RDBMS(BCA-PC(L)-242)**

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| **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, 2024 | 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., 2024 | 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, 2024 | Mock Test |
| **Revision** | Revision of Syllabus and Students Query Handling | 26thApril to Exam Date |  |

Name of Teacher:**Ms. Priyanka**

Class: **BCA III (6th Sem)** Subject**: Information & Cyber Security (BCA-PE(L)-361)**

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| **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. | 3rd Jan.to 10 Feb., 2024 | 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. | 11th Feb.  to  29th Feb., 2024 | 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. | 1st March  to  31st 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. | 1st April  to  25th April, 2024 | Mock Test |
| **Revision** | Revision of Syllabus and Students Query Handling | 26th April to Exam Date |  |

Name of Teacher: **Ms. Priyanka**

Class: **BCA II (4th Sem)**

Subject**: Mobile Application Development (BCA-PE(L)-242)**

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| **Unit** | **Description of Chapter / Topics** | **Duration** | **Assignment / Test** |
| **Unit-1** | Getting started with Mobility: Mobility landscape, mobile platform, mobile apps development, overview of android platform, setting up the mobile app development environment along with an emulator, a case study on mobile app development. | 3rd Jan.to 16th Feb, 2024 | Test-1 |
| **Unit-3** | Sprucing up mobile apps: Graphics and animation- custom views, canvas, animation APIs, multimedia-audio/video playback and record, location awareness, and native hardware access (sensor such as accelerometer and gyroscope). | 17thFeb.  to  20th March, 2024 | Assignment-1 |
| **Revision** | Revision of Syllabus and Students Query Handling | 21st March to Exam Date |  |
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**Government College, Hansi**

**Lesson Plan for Even Semester 2023-24**

Department: **Computer Science**

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

Subject: **Python Programming** Paper:  **BACS-322**

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| **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. | 02-01-24 To  31-01-24 | 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. | 01-02-24  To  25-02-24 | 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. | 26-02-24  To  21-03-24 | 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(). | 26-03-24  To  20-04-24 |  |
| **Revision** |  | 21-04-24 onward | Test 2 |

**Name of Teacher: Naresh kumar Class: BCA-IV sem**

**Subject: Java Programming Code : BCA-PC(L)-351**

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| **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. | 02-01-24 To  31-01-24 | 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. | 01-02-24  To  25-02-24 | 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. | 26-02-24  To  21-03-24 | 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. | | 26-03-24  To  20-04-24 |  |
|  | **Revision** | | | 21-04-24 onward | Test 2 | |

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

Subject**: Computer Network** Paper:  **BCA-PC(L)-244**

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| **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.25, Frame relay; | 02-01-24 To  31-01-24 | 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 | 01-02-24  To  25-02-24 | 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; | 26-02-24  To  21-03-24 | 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; | 26-03-24  To  20-04-24 |  |
| **Revision** |  | 21-04-24 onward | Test 2 |

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

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

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| **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. | 02-01-24 To  31-01-24 | 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. | 01-02-24  To  25-02-24 | 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) | 26-02-24  To  21-03-24 | 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). | 26-03-24  To  20-04-24 |  |
| **Revision** |  | 21-04-24 onward | Test 2 |

**Government College, Hansi**

**Unit wise Lesson Plan for Even Semester 2023-24**

**Department: Computer Science**

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

**Subject: Internet Technology**

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| **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 |  |

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

**Subject: E-Commerce**

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| **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 |  |

**Name of Teacher: Sat Kumar Class: B.sc(H) IInd Sem**

**Subject Computer Science**

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| **Unit** | **Description of Chapter / Topics** | **Duration** | **Assignment / Test** |
| **Unit-1** | Anatomy of a digital Computer, Memory Units, Main and Auxiliary Storage Devices, Input Devices, Output Devices, Classification of Computers. Radix number system: Decimal, Binary, Octal, Hexadecimal numbers and their inter-conversions; Representation of information inside the computers. | 1st weekof January to last week of January |  |
| **Unit-2** | The user Interface, Running Programmes, Managing files, Introduction to PC operating Systems: Unix/Linux, DOS, Windows 2000. | 1st week of February to 4th week of February | Ist Assignment in 4th week of February |
| **Unit-3** | Introduction to the basic concepts of Networks and Data Communications, How Internet works, Major features of internet, Emails, FTP, Using the internet. | 1st week of march to third week of march | Minor test in the last week of march |
| **Unit-4** | Machine-, Assembly-, High Level- Language, Assembler, Compiler, Interpreter, debuggers, Programming fundamentals: problem definition, algorithms, flow charts and their symbols, introduction to compiler, interpreter, assembler, linker and loader and their inter relationship. | 4th week of march to second week of April | 2nd Assignement in the 2nd week of April |
| **Revision** |  | 3rd week of April |  |

**Lesson Plan**

**Government College, Hansi**

**Unit wise Lesson Plan for even Semester 2023-24**

**Department: Computer Science**

Name of Teacher: Uma Sharma Class: PGDCA

Subject: Data structure Paper: PGDCA 201

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| **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 2024 | 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 2024 2024 | 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 2024 | 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, 2024 | Quiz |
| **Revision** | Revision of Syllabus and Students Query Handling | 11th april to exam date | Presentation |

**Name of Teacher: Uma Sharma Class: BCA(VI)**

**Subject: SOFTWARE TESTING AND QUALITY ASSURANCE Paper: BCA-PE(L)-363**

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| **Unit** | **Description of Chapter / Topics** | **Duration** | **Assignment / Test** |
| **Unit 1** | Introduction: Some Terminologies, Failures, Testing Process, Limitations of Testing and V-Shaped  Software Life-Cycle Model.  Functional Testing: Boundary Value Analysis, Equivalence Class Testing, Decision Table Based  Testing, and Cause Effect Graphing Technique.  Structural Testing: Control Flow Testing, Data Flow Testing, Slice Based Testing and Mutation  Testing.  Software Verification: Verification Methods, Software Requirement Specification Document  Verification, Software Design Description Document Verification. | 1st January to 31 January , 2024 | Assignment-1 |
| **Unit 2** | Selection, Minimization and Prioritization of Test Cases for Regression Testing: Regression  Testing, regression Test Case Selection, Reducing the Number of Test Cases, Risk Analysis and CodeCoverage Prioritization Techniques. Software Testing Activities Levels of Testing, Debugging, Software Testing Tools, Software Test Plan.  Object Oriented Testing: Object Orientation, Object Oriented Testing, Path Testing, State Based Testing and class testing. Metrics in Software Testing: Software Metrics, Categories of Metrics, Object Oriented Metrics in Testing. | 1st February to 29th February 2024 | Test-1 |
| **Unit 3** | Software Quality concepts: Meaning and scope, software quality factors, software quality metrics, relationship between quality factors and quality metrics, quality management system,  Concepts of Quality Control, Quality Assurance, Quality Management - Total Quality Management;  Cost of Quality; QC tools, Business Process Re-engineering - Zero Defect, Six Sigma, QualityFunction Deployment, Benchmarking, Statistical process control.  Software measurement: Fundamentals of measurement, Measurements in Software Engineering, Measurement of internal product attributes - size and structure, External product attributes - measurement of quality, Software quality metrics - Software Process, Project and Product Metrics,metrics for software maintenance. | 1st march to 15 march 2024 | Test-2 |
| **Unit 4** | Quality assurance models: ISO-9000 Series and SEI-CMM standards of software quality assurance.  People Capability Maturity Model, Capability Maturity Model Integration, Malcolm Baldrige Award, FCMM.  Software Quality Assurance related topics  Software Process - Definition and implementation; internal Auditing and Assessments; Softwaretesting - Concepts, Tools, software reviews, formal technical reviews, Inspections & Walkthroughs;correctness proof, statistical quality assurance, clean room software engineering. | 15 march to 15 april 2024 | Mock Test |
| **Revision** | Revision of Syllabus and Students Query Handling | 16 april to Exam Date | Presentation |

**Name of Teacher: Uma Sharma Class: BCA(IV)**

**Subject:MOBILE APPLICATION DEVELOPMENT Paper: BCA-PE(L)-242**

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| **Unit** | **Description of Chapter / Topics** | **Duration** | **Assignment / Test** |
| **Unit 2** | Building blocks of mobile apps: Apps user: Interface designing-mobile UI resources (Layout, UI  elements, Draw-able, Menu), activity-states and life-cycle, interaction amongst activities. app  functionality beyond user interface- threads, async task, service –state and life cycle, notification,  broadcast receivers, telephony and smsapis native data handling- on device file I/O, shared preferences,  mobile database such as SQLite, and enterprise data access (via Internet/Intranet) | 1st January to 29 February , 2024 | Assignment-1 |
| **Unit 4** | Testing mobile apps: Debugging mobile apps, white box testing, black box testing, and test automation  of mobile app, JUnit for Android, Robotium, Monkey Talk. Taking apps to market: Versioning signing  and packaging mobile apps, distributing apps on mobile marketplace. | 1st march to 15 April 2024 | Test-1 |
| **Revision** | Revision of Syllabus and Students Query Handling | 16 april to Exam Date | Presentation |

**Lesson Plan**

**Government College, Hansi**

**Unit wise Lesson Plan for Even Semester 2023-24**

**Department: Computer Science**

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

**Subject: Artificial intelligence**

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| **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 |  |

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

**Subject: COA**

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| **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, noaddress 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 |

**Name of Teacher: Sushil Kumar Class: B.A CS IInd Sem**

**Subject** BACS – 122: Computer Organization

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| **Unit** | **Description of Chapter / Topics** | **Duration** | **Assignment / Test** |
| **Unit-1** | Data Representation: Number Systems: Decimal, Binary, Octal, Hexadecimal, Conversion from one number system to other; Binary arithmetic operations, Representation of Negative Numbers: 1’s complement and 2’s complement; fixed and floating point representation, character representation (BCD, EBCDIC and ASCII Code), BCD number system; Weighted Codes, Self Complementing Code, Excess-3 code, Gray and Cyclic code. | 1st weekof January to last week of January |  |
| **Unit-2** | Boolean Algebra: Introduction, Definition, Postulates of Boolean Algebra, Fundamental Theorems of Boolean Algebra; Duality Principle, Demorgan’s Theorems, Boolean Expressions and Truth Tables, Standard SOP and POS forms, Canaonical representation of Boolean expressions, Simplification of Boolean Expressions using theorems of Boolean algebra, Minimization Techniques for Boolean Expressions using Karnaugh Map. Logic Gates: AND, OR, NOT, NOR, NAND & XOR Gates and their Truth tables. | 1st week of February to 4th week of February | Ist Assignment in 4th week of February |
| **Unit-3** | Combinational Circuits: Half Adder & Full Adder, Half Subtractor & Full Subtractor, Adder & Subtractor, decoders, multiplexors. Realization of Boolean expressions using decoders and multiplexor. Sequential Circuits: Flip-Flops, Types- RS, T, D, JK and Master-Salve JK flip flop, Triggering of Flip Flops; Flip Flop conversions, Shift Registers, Synchronous and Asynchronous Counters. | 1st week of march to third week of march | Minor test in the last week of march |
| **Unit-4** | Basic Computer Organization and Design: Register Organization, Bus system, instruction set, timing and control, instruction cycle, memory reference, input-output and interrupt. Programming the Basic Computer: Instruction formats, addressing modes, instruction codes. Input-output Organization: Peripheral devices, I/O interface, Modes of data transfer, Direct Memory Access. | 4th week of march to second week of April | 2nd Assignment in the 2nd week of April |
| **Revision** |  | 3rd week of April |  |

**Name of Teacher: Sushil Kumar Class: BCA IInd Sem**

**Subject Data Structure**

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| **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 |  |

**Name of Teacher: Sushil Kumar Class: BACS IInd Sem**

**Subject : Data Structure**

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| **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 |  |

**Government College Hansi**

**Unit wise Lesson Plan for Even Semester, 2023-24**

Name of Teacher : **Dr. Sudesh**

Class : **B.Sc 2nd Semester** Subject: **Biology-II** Paper : **Theory**

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| **Unit** | **Description of Chapter/Topic** | **Duration** | **Assignment/Test** |
| Unit 1 | Cell: Introduction and classification of organisms by cell structure, cytosol, Compartmentalization of  eukaryotic cells, Cell fractionation. Cell Membrane and Permeability: Chemical components and organization of biological membranes, Fluid Mosaic Model, Membrane as a dynamic entity, Cell recognition and membrane transport. | 1st week of January to4th week of January | Verbly test |
| Unit 2 | Endo Membranous System and Cytoskeleton:  Endoplasmic reticulum: Structure, function including role in protein segregation.Golgi complex: Structure, biogenesis and functions including role in protein secretion.  Lysosomes: Vacuoles and micro bodies, Structure and function of microtubules, Microfilaments, Intermediate filaments. | 1st week of February to 3rdweek of February | Ist Assignment in 3rd week of February |
| Unit 3 | Mitochondria and Chloroplast, Nucleus and Ribosome: Mitochondria: Structure and function, genomes, biogenesis. Chloroplasts: Structure and function, genomes, biogenesis. Nucleus: Structure and function, chromosomes and their structure and functions. Ribosomes: Structures and function including role in protein synthesis. | 4th week ofFebruary to3rd week of March | Minor test in2nd week of March |
| Unit 4 | Cell Division: Mitosis, Meiosis, Cell cycle and its regulation Signal transduction: Cell Signaling through GPCR and Role of secondary messenger: cAMP and Protein Kinase. Cancer: Carcinogenesis, agents promoting carcinogenesis, characteristics and molecular basis of cancer. | 4th week of March to1st week of April | 2nd Assignement in the 3rd week of March |
| Revision | Revision, problem solving | 1st and 2nd week of April |  |

Name of Teacher : **Dr. Sudesh**

Class : B.Sc 6th Semester Subject: **QUANTUM CHEMISTRY** Paper : Theory

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| **Unit** | **Description of Chapter/Topic** | **Duration** | **Assignment/Test** |
| 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. | 1st week of January to4th week of January | Verbly test |
| 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 zcomponent. Rigid rotator model of rotation of diatomic molecule.Schrödinger equation. | 1st week of February to 3rdweek of February | Ist Assignment in 3rd week of February |
| 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 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). | 4th week ofFebruary to3rd week of March | Minor test in2nd week of March |
| 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 LCAOMO 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) | 4th week of March to1st week of April | 2nd Assignement in the 3rd week of March |
| Revision | Revision, problem solving | 1st and 2nd week of April |  |

Name of Teacher : **Dr. Sudesh**

Class : B.Sc 6th Semester Subject: **SPECTROSCOPY & PHOTOCHEMISTRY** Paper : Theory

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| **Unit** | **Description of Chapter/Topic** | **Duration** | **Assignment/Test** |
| Unit 1 | Molecular Spectroscopy: Interaction of electromagnetic radiation with molecules and various types of spectra; BornOppenheimer 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 | 1st week of January to4th week of January | Verbly test |
| 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 states, fluorescence and phosphorescence, dissociation and predissociation, calculation of electronic transitions of polyenes using free electron model. | 1st week of February to 3rdweek of February | Ist Assignment in 3rd week of February |
| 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. | 4th week ofFebruary to3rd week of March | Minor test in2nd week of March |
| Unit 4 | 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. | 4th week of March to1st week of April | 2nd Assignement in the 3rd week of March |
| Revision | Revision, problem solving | 1st and 2nd week of April |  |

Name of Teacher :**Dr. Sudesh**

Class : **B.Sc math hons 2nd Semester** Subject: **Chemistry-II** Paper : **Theory**

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| **Unit** | **Description of Chapter/Topic** | **Duration** | **Assignment/Test** |
| Topic-1 | Introduction to Ionic Bonding: General characteristics of ionic bonding. Energy considerations in ionic bonding, lattice energy and solvation energy and their importance in the context of stability and solubility of ionic compounds. | 1st week of January to4th week of January | Verbly test |
| Topic-2 | Statement of Born-Landé equation for calculation of lattice energy, polarizing power and polarizability | 1st week of February to 3rdweek of February | Ist Assignment in 3rd week of February |
| Topic-3 | Introduction to Covalent bonding: Shapes of some inorganic molecules and ions on the basis of VSEPR and hybridization with suitable examples of linear, trigonal planar, square planar, tetrahedral, trigonal bipyramidal and octahedral arrangements. | 4th week ofFebruary to3rd week of March | Minor test in2nd week of March |
| Topic-4 | Ionic Solids: Factors affecting the formation of ionic solids, concept of close packing, radius ratio rule and coordination number. Calculation of limiting radius ratio for tetrahedral and octahedral sites. Structures of some common ionic solids NaCl, ZnS (zincblende and wurtzite). | 4th week of March to1st week of April | 2nd Assignement in the 3rd week of March |
| Revision | Revision, problem solving | 1st and 2nd week of April |  |

**Lesson Plan**

**Government College, Hansi**

**Unit wise Lesson Plan for 2nd Semester 2023-24**

**Department: Chemistry**

Name of Teacher: Priyanka Punia Class: B.Sc.INM

Subject: Chemistry Paper: Organic Chemistry

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| **Unit** | **Description of Chapter / Topics** | **Duration** |  | **Assignment / Test** |
| **Unit-1** | Aromatic hydrocarbons  Preparation (Case benzene): from phenol, by decarboxylation, from  Acetylene, from benzene sulphonic acid.  Reactions: (Case benzene): Electrophilic substitution: nitration, halogenation and  Sulphonation. Friedel-Craft’s reaction (alkylation and acylation) (upto 4 carbons  On benzene). Side chain oxidation of alkyl benzenes (upto 4 carbons on benzene). | 01-01-2024 to  15-01-2024 |  |  |
| **Unit-2** | .  Alkyl Halides (Upto 5 Carbons) Types of Nucleophilic Substitution (SN1, SN2 and  SNi) reactions.  Preparation: from alkenes and alcohols.  Reactions: hydrolysis, nitrite & nitro formation, nitrile &isonitrile formation.  Williamson’s ether synthesis: Elimination vs substitution.  Aryl Halides Preparation: (Chloro, bromo and iodo-benzene case): from phenol,  Sandmeyer&Gattermann reactions.  Reactions (Chlorobenzene): Aromatic nucleophilic substitution (replacement by –  OH group) and effect of nitro substituent. Benzyne Mechanism: KNH2/NH3 (or  NaNH2/NH3).  Reactivity and Relative strength of C-Halogen bond in alkyl, allyl, benzyl, vinyl  And aryl halides. | 16-02-2024 to  05-02-2024 |  | Test |
| **Unit-3** | Alcohols: Preparation: Preparation of 1о  , 2о  And 3о  Alcohols: using Grignard  Reagent, Ester hydrolysis, Reduction of aldehydes, ketones, carboxylic acid and  Esters.  Reactions: With sodium, HX (Lucas test), esterification, oxidation (with PCC, alk.  KMnO4, acidic dichromate, conc. HNO3). Oppeneauer oxidation Diols: (Upto 6  Carbons) oxidation of diols. Pinacol-Pinacolone rearrangement.  Phenols: (Phenol case) Preparation: Cumenehydroperoxide method, from  Diazonium salts. Reactions: Electrophilic substitution: Nitration, halogenation and  Sulphonation. Reimer-Tiemann Reaction, Gattermann-Koch Reaction, Houben–  Hoesch Condensation, Schotten – Baumann Reaction.  Ethers (aliphatic and aromatic): Cleavage of ethers with HI. | 06-02-2024 to  25-02-2024 |  | Assignment |
| **Unit-4** | (Formaldehye, acetaldehyde, acetone and benzaldehyde)  Preparation: from acid chlorides and from nitriles.  Reactions – Reaction with HCN, ROH, NaHSO3, NH2-G derivatives. Iodoform  Test. Aldol Condensation, Cannizzaro’s reaction, Wittig reaction, Benzoin  Condensation. Clemensen reduction and Wolff Kishner reduction. MeerweinPondorff | 25-02-2024 to  16-03-2024 |  |  |
| **Revision** | Revision of the Syllabus | 16-03-2024 to  Exam |  |  |

Name of Teacher: Priyanka Punia Class: B.Sc3redNM

Subject: Chemistry Paper: organometallic and Bioinorganic Chemistry

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| **Unit** | **Description of Chapter / Topics** | **Duration** | **Assignment / Test** |
| **Unit-1** | Chemistry of 3d metals  Oxidation states displayed by Cr, Fe, Co, Ni and Co.  A study of the following compounds (including preparation and important properties);  Peroxo compounds of Cr, K2Cr2O7, KMnO4, K4[Fe(CN)6], sodium nitroprusside, [Co(NH3)6]Cl3,  Na3[Co(NO2)6]. | 01-01-2024 to  15-01-2024 |  |
| **Unit-2** | Organometallic Compounds  Definition and Classification with appropriate examples based on nature of metalcarbon bond (ionic, s,  P and multicentre bonds). Structures of methyl lithium, Zeiss salt and ferrocene. EAN rule as applied to  Carbonyls. | 16-02-2024 to  05-02-2024 | Test |
| **Unit-3** | Preparation, structure, bonding and properties of mononuclear and polynuclear carbonyls of 3d  Metals.p-acceptor behaviour of carbon monoxide. Synergic effects (VB approach)-(MO diagram of CO  Can be referred to for synergic effect to IR frequencies). | 06-02-2024 to  25-02-2024 | Assignment |
| **Unit-4** | Bio-Inorganic Chemistry  A brief introduction to bio-inorganic chemistry. Role of metal ions present in biological systems with  special reference to Na+  , K+ and Mg2+ ions: Na/K pump; Role of Mg2+ ions in energy production and  chlorophyll. Role of Ca2+ in blood clotting, stabilization of protein structures and structural role (bones) | 25-02-2024 to  16-03-2024 |  |
| **Revision** | Revision of the Syllabus | 16-03-2024to  Exam |  |

Name of Teacher: Priyanka Punia Class: B.Sc3redNM

Subject: Chemistry Paper: polynuclearhydrocarbon andUV & IR spectroscopy

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| **Unit** | **Description of Chapter / Topics** | **Duration** | **Assignment / Test** |
| **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. | 01-01-2024 to  15-01-2024 |  |
| **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). | 16-02-2024 to  05-02-2024 | 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  Hypsochromic shifts. Application of electronic spectroscopy and Woodward rules for calculating λmax of  Conjugated dienes and α,β-unsaturated compounds | 06-02-2024 to  25-02-2024 | Assignment |
| **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). | 25-02-2024 to  16-03-2024 |  |
| **Revision** | Revision of the Syllabus | 16-03-2024to  Exam |  |

**Lesson Plan**

**Government College, Hansi**

**Unit wise Lesson Plan for Even Semester 2023-24**

**Department: Chemistry**

Name of Teacher: Renu Rani Class: B.Sc. 4thsemNM

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

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| **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-2ndWeek 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 *Oh* and *Td* complexes, Tetragonaldistortion of octahedral geometry.Jahn-Teller distortion, Square planar coordination. | 3rd Week of March-2ndWeek of April | Test- 2nd Week of April |
| **Revision** | Problems and revision of all 4 units | 3rd& 4th week of April |  |

Name of Teacher: Renu Rani Class: B.Sc. 4thsemNM

Subject: Chemistry Paper: Physical Chemistry (CCL-405)

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| **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 CO2. 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 -3rdWeek 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 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. | 4thWeek of Feb-2ndWeek of March | Assignment-2nd Week of March  Test- 3rd Week of March |
| **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-2ndWeek of April | Test- 2nd Week of April |
| **Revision** | Problems and Revision | 3rd& 4th week of April |  |

Name of Teacher: Renu Rani Class:B.Sc. 2nd Sem Math H

Subject: Chemistry Paper: Chemistry (BCL-201)

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| **Unit** | **Description of Chapter / Topics** | **Schedule/ Duration** | **Assignment / Test** |
| **Unit-2** | Acids and Bases Brönsted–Lowry concept, conjugate acids and bases, relative strengths of acids and bases, effects of substituent and solvent, differentiating and levelling solvents. Lewis acid-base concept, classification of Lewis acids and bases, Lux-Flood concept and solvent system concept. Hard and soft acids and bases (HSAB concept), applications of HSAB process.  Basic Coordination Chemistry Coordinate Bond. Werner’s coordination theory, ligands, chelates. Nomenclature of coordination compounds. Stereochemistry of different coordination numbers, isomerism. Valence-bond and crystal field theories of bonding in complexes. Explanation of properties such as geometry colour and magnetism. | 1st Week of January- 1st Week of Feb | Test- 2nd Week of Feb |
| **Unit-3** | Chemical Kinetics And Catalysis Rates of reactions, rate constant, order and molecularity of reactions. Differential rate law and integrated rate expressions for zero, first, second and third order reactions. Half-life time of a reaction. Methods for determining order of reaction. Effect of temperature on reaction rate and the concept of activation energy. Catalysis: Homogeneous catalysis, Acid-base catalysis and enzyme catalysis. Heterogeneous catalysis. | 2nd Week of Feb -1st Week of March | Assignment- 2nd Week of Feb  Test- 2nd Week of March |
| **Unit 4** | Basics of spectroscopy Origin of spectra, interaction of radiation with matter, fundamental laws of spectroscopy and selection rules, validity of Beer-Lambert's law. Electromagnetic radiations, Introduction to ultraviolet, visible and infrared spectroscopy, electronic transitions, λmax& εmax, chromophore, auxochrome, bathochromic, hypsochromic shifts. Infrared radiation and types of molecular vibrations, functional group and fingerprint region. | 2nd Week of March-1st Week of April | Test- 2nd Week of April |
| **Revision** | Problems and Revision | 3rd& 4th Week of April |  |

Name of Teacher: Renu Rani Class:B.Sc. 2nd Sem NM

Subject: Chemistry Paper: Physical Chemistry (CCL-204)

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| **Unit** | **Description of Chapter / Topics** | **Schedule/ Duration** | **Assignment / Test** |
| **Unit-1** | **Chemical Energetics**  Review of thermodynamics and the Laws of Thermodynamics. Important principles and definitions of thermochemistry. Concept of standard state and standard enthalpies of formations, integral and differential enthalpies of solution and dilution. Calculation of bond energy, bond dissociation energy and resonance energy from thermochemical data. Variation of enthalpy of a reaction with temperature – Kirchhoff’s equation. Statement of Third Law of thermodynamics and calculation of absolute entropies of substances. | 1st Week -3rd Week of January | 1stAssignment & Test- 4th Week of January |
| **Unit-2** | **Chemical Equilibrium**  Free energy change in a chemical reaction. Thermodynamic derivation of the law of chemical equilibrium. Distinction between ΔG and ΔGo, Le Chatelier’sprinciple. Relationships between Kp, Kcand Kxfor reactions involving ideal gases. | 1st Week -3rd Week of Feb | Test- 4th Week of Feb |
| **Unit 3** | **Ionic Equilibria-I**  Strong, moderate and weak electrolytes, degree of ionization, factors affecting degree of ionization, ionization constant and ionic product of water. Ionization of weak acids and bases, pH scale, common ion effect. | 1st week -3rd Week of March | 2nd Assignement-2nd Week of March Test- 1st Week of April |
| **Unit-4** | **Ionic Equilibria-II** Salt hydrolysis-calculation of hydrolysis constant, degree of hydrolysis and pH for different salts. Buffer solutions. Solubility and solubility product of sparingly soluble salts – applications of solubility product principle. | 1st week- 2ndweek of April | Test- 3rd Week of April |
| **Revision** | Problems and Revision | Last Week of April |  |

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| Sr. no. | PARTICULARS/TOPICS (MARKETING MANAGEMENT) | DURATION |  | RMARKS |
| UNIT  1. | INTRODUCTION TO MARKETING; DIERENCE BETWEEN MARKETING AND SELLING, CORE CONCEPTS OF MARKETING, MARKETING MIX, MARKETING P[ROCESS,MARKETING ENVIRONMENT | JANUARY 2024 |  |  |
| UNIT  2. | DETERMINANTS OF CONSUMER BEHAVIOUR, CONSUMERS PURCHASE DECISION PROCESS, MARKET SEGMENTATION, TARGETING AND POSITIONING, MARKETING RESARCH,AND MIS | FEBRUARY  2024 |  |  |
| UNIT  3. | PRODUCT DECISION; NEW PRODUCT DEVELOPMENT, PRODUCT LINE DECISION, PLC, BRANDING , PACKAGING AND LABELING, PRICING DECISION.  TEST -1 AND TEST 2 | MARCH  2024 |  |  |
| UNIT  4. | MARKETING CHANNELS; RETAILING , WHOLESALING, WAREHOUSING, AND PHYSICAL DISTRIBUTION, SCM,CRM , PROMOTION MIX ; PERSONAL SELLING, ADVERTISEMENT, SALS PROMOTION AND PUBLIC RELATIONS AND DIRECT MARKETING.  ASSIGNMENT 1 AND 2 WITH VIVA | APRIL  2024 |  |  |

**MR. AJMER SINGH, GOVT. COLLEGE HANSI**

**LESSON PLAN—MARKETING MANAGEMENT (M.com P)**

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| 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 RESEATRCH, UNDRSTANDING INDUSTRIAL AND CONSUMERS MARKET, SEGMENTATION AND TARGETING , POSITIONING.  ASSIGNMENT -1 | JANUARY  2024 |  |
| UNIT  2. | PRODUCT DECISIONS, PRODUCT CONCEPTS AND CLASSIICATIONS, PRODUCT MIX, PLC, NEW PRODUCT DEVELOPMENT, BRNADING , PACKAGING , LABELING, PRICING – FACTORS,SETTING,STRATEGIS AND METHODS .  ASSIGNMENT -2 | FEBRUARY  2024 |  |
| 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 AREASO LOGISTICS.  PROMOTION AND COMMUNICATION DECISION, ELEMENTS OF PROMOTION MIX, ADVT, SALES PROMOTION, PERSONAL SELLING AND PUBLIC RELATION.  TEST-1 AND 2 | MARCH  2024 |  |
| 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  2024 |  |

**MR. AJMER SINGH, GOVT. COLLEGE HANSI**

**Sales Management**

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| SR. NO. | PARTICULARS | DURATION/  MONTH | REMARKS |
| UNIT 1. | SALES MGT. –CONCEPTS, SALES VS MARKETING, MODERN ROLES AND REQUIREMENTS SKILLS FOR SALES MANAGERS. | JANUARY |  |
| UNIT  2. | SALES PLANNING; IMPORTANCE, PROCESS, SALES ORGANISATION-PURPOSE AND STUCTURES, DETERMINIG SALES FORCE. | FEBRUARY |  |
| UNIT  3. | TERRITORY MGT., NEED, PROCEDURE, TIME MGT, ROUTING, SALES QUOTAS- PURPOSE, TYPES AND ADMINISTRATION  TEST -1 AND TEST -2 , ASSIGNMENT-1 AND 2, VIVA | MARCH |  |
| UNIT  4. | MANAGING THE SALES FORCE RECRUITMENT, SELECTION, TRAINING AND COMPANSATION, EVALUATING SALES FORCE PERFORMANCE, ETHICAL ISSUES IN SALES MGT. | APRIL |  |

**Govt. college Hansi**

**Lesson plan.**

**Unit wise lesson plan for the Even Semester, 2023-24.**

**Teacher: Aakanksha Class: B.com f**

**Section: --- A & B Subject: Financial services**

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| **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.** | 1st week of January to last week of January | 1st assignment in the beginning of last week of January |
| **Unit 2** | Merchant banking: Meaning,functions and regulatory framework; Mutual funds; Insurance ; Micro finance institutions | 1st week of Feb to last week of Feb. | Minor test in the 2nd week of Feb. |
| **Unit 3** | Fund based Financial services: Leasing and hire purchase, consumer and housing finance ; Venture capital finance; Factoring services, securitaization | 1st week of March to last week of March | 2nd assignment in the 2nd 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 |
| **Revision** | Revision, presentation, problem solving | Last week of April | ……. |

**Govt. college Hansi**

**Lesson plan.**

**Unit wise lesson plan for the Even Semester, 2023-24.**

**Teacher: Aakanksha Class: M.com (F)**

**Section: --- Subject: Rural marketing**

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| **Unit** | **Description of chapters/topics** | **Duration** | **Assignment/Test** |
| **Unit 1** | **Features, significance, scope and limitations of rural market in india; Environmental factors affecting rural markets ; changing focus of corporate world towards rural market, demographic and psychographic profile of rural consumer, classification of products and services, rural demands and problems in rural marketing** | 1st week of January to last week of January | 1st assignment in the beginning of last week of January |
| **Unit 2** | Agriculture marketing- definition, scope, Concept and objectives, difference in Agriculture and consumer marketing , constraints in Agriculture marketing, role of Agriculture in economic development, role of government in Agriculture development, Agribusiness; Export potential for farm products -Supporting services | 1st week of Feb to last week of Feb. | Minor test in the 2nd week of Feb. |
| **Unit 3** | Cooperative Marketing- Concept, history, functions- reasons for slow progress of Cooperative sector, advantages and limitations of organized retailing in Agriculture inputs and outputs, trends in Agri marketing. Supply chain management in Agri business i.e cold chains organized procurement and warehousing | 1st week of March to last week of March | 2nd assignment in the 2nd week of March |
| **Unit 4** | Marketing mix for rural products; role of Financial institutions in rural marketing. Rural marketing strategies. Different models and case studies of corporate vis Tata Kisan Kendra , commodity market functioning. Innovative distribution channels like ITC E- coupal, Godrej Adhar, HUL Shakti | 1st week of April to 15th April | 2nd test in 2nd week of April |
| **Revision** | Revision, presentation, problem solving | Last week of April | ……. |

**Govt. college Hansi**

**Lesson plan.**

**Unit wise lesson plan for the Even Semester, 2023-24.**

**Teacher: Aakanksha Class: M.com (P)**

**Section: --- Subject: IB**

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| **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 involment in international business. Factors affecting international business: social and cultural, economic, political, legal and technological advancement. Globalization-features and components, advantages and disadvantages.** | 1st week of January to last week of January | 1st assignment in the beginning of last week of January |
| **Unit 2** | Theories of international trade: classical and modern theory of international trade, modes of entry into international business: exporting, licensing, franching, contract manufacturing, turnkey project, foreign direct investment and joint venture. | 1st week of Feb to last week of Feb. | Minor test in the 2nd week of Feb. |
| **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. | 1st week of March to last week of March | 2nd assignment in the 2nd 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 |
| **Revision** | Revision, presentation, problem solving | Last week of April | ……. |

**CLASS:B.Com.-III Year ( VI Sem)(2023-24)**

**NAME OF PAPER –Income Tax**

**PAPER CODE – BCOM 504**

**Teacher name- Shamendra Bamal**

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

**CLASS:M.Com.-II Year ( II Sem)(2023-24)**

**NAME OF PAPER – MANAGEMENT AND COST ACCOUNTING**

**PAPER CODE – BCOM 205**

**Teacher name- Shamendra Bamal**

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| **SR.**  **NO.** | **MONTHS** | **PERIOD** | **TOPICS** |
| **1.** | **January** | **1st week**  **2nd week**  **3rd week**  **4th week** | Management Accounting-Nature, Functions, Objectives and Scope; Financial Accounting vs. Cost Accounting vs. Management Accounting |
| Role and Responsibilities of Management Accountant in a Business Organization. Cost Accounting: Meaning |
| Cost concepts and classifications. |
| Budgetary Control: Definition; Installation of the System; Classification of the Budgets; Behavioural aspects of Budgeting. Standard Costing |
| **2.** | **February** | **1st week**  **2nd week**  **3rd week**  **4th week** | Variance Analysis: Concept; Setting of Standards; Analysis of different types of material, labour, overhead and sales variances |
| Marginal Costing and Break even analysis |
| Cost – Volume- Profit Analysis; |
| Assignment & Test |
| **3.** | **March** | **1st week**  **2nd week**  **3rd week**  **4th week** | Different types of Break-even Points and Charts; Application of Marginal costing to managerial decision making |
| Responsibility Accounting: Concept and significance; Organizational structure and Decentralization |
| Cost and benefits of decentralization; Responsibility Centers: Cost Centre, Revenue centre, |
| Assignments & Test |
| **4.** | **April** | **1st week**  **2nd week**  **3rd week**  **4th week** | Profit centre and Investment centre; Transfer pricing; Alternative Transfer Pricing Methods. Divisional Performance Measurement: Return on Investment |
| Residual Income; Economic Value Added and Return on Sales Non – Financial Performance measures; Balanced Scorecard |
| Revision |
| Revision |

**GOVERNMENT COLLEGE HANSI**

**Department of Commerce**

**Lesson Plan for Odd Semester 2023-24**

Name of Teacher:**Shiv Kumar** Class:**M.Com. (P) Sem.-2**

Subject:**HUMAN RESOURCE MANAGEMENT** Paper: **MC-204**

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| **Unit** | **Description of Chapter / Topics** | **Duration** | **Assignment / Test** |
| **Unit-1** | Concepts and perspectives of Human Resource Management; Human Resources Management in achanging environment; Managerial and operative functions of HRM | 2 Weeks | Assignment-1  1stWeek of March |
| **Unit-2** | Recruitment, Placement and Retention Strategies: Human Resource Planning; Job Analysis;Methods of Manpower Search; Attracting, Selecting and Retaining Human Resources; Inductionand Socialization. | 3 Weeks | Minor Test-1  1stWeek of  March |
| **Unit-3** | Training and Development: Manpower Training and Development; Performance Appraisal andPotential Evaluation; Career and Succession Planning; Talent Management. | 4 Weeks | Assignment 2  4thWeek of March |
| **Unit-4** | Employee Relations and Compensation Administration: Job Evaluation and CompensationManagement; Incentives and Employee Benefits; Employee Welfare; Industrial Relation; EmployeeSeparation Practices, HR Accounting and audit. | 3 Weeks | Viva-voce Exam. and Presentations  1stWeek of April |
| **Revision** | Revision | 1 Week | - |

**GOVERNMENT COLLEGE HANSI**

**Department of Commerce**

**Lesson Plan for Odd Semester 2023-24**

Name of Teacher: **Shiv Kumar** Class: **B.Com. 2nd Sem. - 4**

Subject: **Companies Law**  Paper: **BCOM 404**

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| **Unit** | **Description of Chapter / Topics** | **Duration** | **Assignment / Test** |
| **Unit-1** | Meaning and nature of company, kinds of companies, formation and incorporation of company,Memorandum of Association; Articles of Association, Doctrine of indoor management. | 3 Weeks | Assignment-1  1st Week of March |
| **Unit-2** | Meaning and definition of prospectus; misstatement in a prospectus and their consequences.Membership of a company, Meaning, need and requisitions of valid meeting; voting, proxy andresolutions; kinds of general body meetings. | 3 Weeks | Minor Test-1  1st Week of  March |
| **Unit-3** | Meaning, qualification, appointment and removal of directors; duties and liabilities of directors;remuneration of directors; distinction between managing director and manager; distinctionbetween managing director and whole time director; meetings of board of directors. Inspectionand investigation. | 3 Weeks | Assignment 2  4th Week of March |
| **Unit-4** | Compromise, arrangements and amalgamations: Prevention of oppression and mismanagement.Meaning and modes of winding up of a company; power and duties of a liquidator in winding up. | 3 Weeks | Viva-voce Exam.  1st Week of April |
| **Revision** | Revision | 1 Week | - |

**GOVERNMENT COLLEGE HANSI**

**Department of Commerce**

**Lesson Plan for Odd Semester 2023-24**

Name of Teacher: **Shiv Kumar** Class: **B.Com. 3rdSem. –6 (A&B)**

Subject: **Investment Management**  Paper: **BCOM 606(ii)**

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| **Unit** | **Description of Chapter / Topics** | **Duration** | **Assignment / Test** |
| **Unit-1** | Investment Management: Meaning, Nature and Importance of Investment Management,Investment Process, Speculations v/s Investment, Gambling v/s Investment, InvestmentObjectives, Concept of Return and Risk: Calculation, Tradeoff between Return and Risk. | 3 Weeks | Assignment-1  1st Week of March |
| **Unit-2** | Investment Avenues: Post Office Small Saving Schemes, Bank Deposits, Insurance Schemes,Company Bonds & Deposits, Mutual Fund Schemes, Real Estate, Other Investment Avenues. | 2 Weeks | Minor Test-1  1st Week of  March |
| **Unit-3** | Financial Markets: Meaning and Functions, Capital Market, Money Market, New Issue Market,Secondary Market, SEBI and its Regulations. | 3 Weeks | Assignment 2  4th Week of March |
| **Unit-4** | Security Analysis: Meaning and objectives. Fundamental Analysis: Economy Analysis, IndustryAnalysis and Company Analysis. | 4 Weeks | Viva-voce Exam.  1st Week of April |
| **Revision** | Revision | 1 Week | - |

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

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

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| **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., 2024 | 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. – 29th Feb., 2024 | 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 – 22nd March, 2024 | 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 – 15th April, 2024 | 2nd Assignment in the 1st Week of April |
| **Revision** | **Revision, Problem Solving & Quizzes, Presentations.** | 16th April Onwards | ………… |

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

**Subject**- Financial Accounting **Paper**- BCOM 201

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| **Unit** | **Description of Chapters/Topics** | **Duration** | **Assignment/Test** |
| Unit 1 | **Royalty Accounts & Consignment Accounts:-** Meaning & Features, Need & Importance & Accounting Procedures. | 20th Feb. – 7th March, 2024 | 1st Assignment in the 3rd Week of February |
| Unit 2 | **Joint Venture & Branch Accounts:-** Meaning & Features & Accounting Procedures. | 8th March – 22nd March, 2024 | 1st Minor Test in the 2nd Week of March |
| Unit 3 | **Hire Purchase System & Installment Payment System:-** Meaning, features, Accounting Treatment & Diff. b/w Hire Purchase System & Installment Payment. | 1st April – 10th April, 2024 | 2nd Minor Test in the 1st Week of April |
| Unit 4 | **Retirement or Death of a Partner & Dissolution of Partnership firm:-** Meaning & Features, & Accounting Treatment including Garner v/s Murrey Rule. | 11th April – 25th April, 2024 | 2nd Assignment in the 2nd Week of April |
| Revision | Revision, Problem Solving & Presentations. | 26th April Onwards | …… |

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

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

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| **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., 2024 | 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. – 20th Feb., 2024 | 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. | 21st Feb. – 22nd March, 2024 | 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 – 15th April, 2024 | 2nd Assignment in the 1st Week of April |
| Revision | Revision, Problem Solving & Quizzes | 16th April Onwards | …… |

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

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

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| **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., 2024 | 1st Assignment in the 3rd Week of January |
| Unit 2 | **Capital Structure :** Theories & its Determinants, Cost of Capital, Sources of Finance. | 1st Feb. – 29th Feb., 2024 | 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 –22nd March, 2024 | 2nd Minor Test in the 3rd Week of March |
| Unit 4 | **Dividend Policy Models.** | 1st April – 15th April, 2024 | 2nd Assignment in the 1st Week of April |
| Revision | **Revision, Problem Solving & Quizzes, Presentations.** | 16th April Onwards | …… |

**Lesson Plan**

**Government College, Hansi**

**Unit wise Lesson Plan for Even Semester 2023-2024**

**Department: Commerce**

Name of Teacher: Dr.Sushila Class:

Subject:Goods and services tax Paper:

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| **Unit** | **Description of Chapter / Topics** | **Duration** | **Assignment / Test** |
| **Unit-1** | 1)Tax Structure in India  2) Overview of GST  3) Administration of GST  4) Taxable Event and Scope of Supply under GST | January | Chapter 3 and 4  First Assigment |
| **Unit-2** | 5) Levy and Connection of Tax  6) Small Taxable Persons : Exemptions and Compostion Scheme  7) Time of Supply  8) The Integrated Goods and Services Tax Act, 2017 | February | Test |
| **Unit-3** | 9) Nature of Supplies : Inter-State and Intra- state  10)Place of Supply  11)Value of Taxable Supply  12)Input Tax Credit  13)Registration | March | Chapter 12 and 13  Second Assigment |
| **Unit-4** | 14)Tax Invoice, Credit and Debit Notes  15)Returns, Assessment and Audit  16)Payment of Tax  17)Offences and Penalties | April | Test |
| **Revision** | Till Exam time |  |  |

CLASS:B.Com.-II Year ( II Sem)(2023-24) NAME OF PAPER –Business Communication

PAPER CODE – BCOM 203

Teacher name- Mr.Vijay Kaliraman

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

CLASS:M.Com.-II Year ( IV Sem)(2023-24) NAME OF PAPER –Performance Mgt

PAPER CODE – MC 431

Teacher name- Mr.Vijay Kaliraman

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

CLASS:B.Com.-III Year ( IV Sem)(2023-24) NAME OF PAPER –E.D

PAPER CODE – BCOM 405

Teacher name- Mr.Vijay Kaliraman

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| **SR.**  **NO.** | **MONTHS** | **PERIOD** | **TOPICS** |
| **1.** | **January** | **1st week**  **2nd week**  **3rd week**  **4th week** | Entrepreneurship- Meaning, Nature and Scope. Characteristics and Qualities of a Successful Entrepreneur. |
| Role of Entrepreneurship Development in the Economic Development |
| Women entrepreneurship |
| Rural entrepreneurship. |
| **2.** | **February** | **1st week**  **2nd week**  **3rd week**  **4th week** | Factors affecting entrepreneurship growth. Entrepreneurial motivation |
| Entrepreneurial competencies. Role, relevance and achievements of Entrepreneurial Development Programmes (EDP); |
| Role of government in organizing EDP’s-critical evaluation. |
| Assignments & Test |
| **3.** | **March** | **1st week**  **2nd week**  **3rd week**  **4th week** | Micro and small enterprises. Opportunity Identification and selection. |
| Formulation of business plans. Project appraisal. |
| Financing of Enterprise. Institutional finance to entrepreneurs. |
| Assignments & Test |
| **4.** | **November** | **1st week**  **2nd week**  **3rd week**  **4th week** | Institutional support to entrepreneurs. |
| Government policy for small-scale enterprises. |
| Revision |
| Revision |

**Govt. College, Hansi**

**Lesson Plan**

**Unit wise lesson plan for the Even Semester 2023-24**

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

**Subject: Business Statistics-II Section: ---**

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| **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 2024 to  3rd week of Jan 2024 | ……. |
| **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 2024 to 3rd week of Feb 2024 | 1stminor test in the 1st week Feb 2024.  1st assignment in the 2nd week Feb 2024. |
| **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 2024 to 2nd week of Mar 2024 | 2ndminor test in the 1stweek Mar 2024. |
| **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 2024 to 1st week of Apr 2024 | 2nd assignment in the 3rdweek Feb 2024.  Viva-voice in the 1stweek Apr 2024.**(Revision from 2nd of Apr 2024 till Exams)** |

**Govt. College, Hansi**

**Lesson Plan**

**Unit wise lesson plan for the Even Semester 2023-24**

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

**Subject: Cost Accounting Section: ---**

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| **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 2024 to  3rd week of Jan 2024 | ……. |
| **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 2024 to 3rd week of Feb 2024 | 1stminor test in the 1st week Feb 2024.  1st assignment in the 2nd week Feb 2024. |
| **Unit 3** | **Job costing, batch costing and contract costing, Process costing.** | 4th week of Feb 2024 to 2nd week of Mar 2024 | 2ndminor test in the 1stweek Mar 2024. |
| **Unit 4** | **Standard costing and variance analysis (material, labour and overhead), Responsibility and reporting.** | 3rd week of Mar 2024 to 1st week of Apr 2024 | 2nd assignment in the 3rdweek Feb 2024.  Viva-voice in the 1stweek Apr 2024.**(Revision from 2nd of Apr 2024 till Exams)** |

**Govt. College, Hansi**

**Lesson Plan**

**Unit wise lesson plan for the Even Semester 2023-24**

**Teacher: Vijay Kumar Yadav Class : B. Com 1st**

**Subject: Business Environment Section: ---**

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| **Unit No.** | **Description of Chapters/ Topic** | **Expected Duration** | **Assignment/Test** |
| **Unit 1** | **Business Environment – Meaning, Nature and Significance, A brief overview of business environment and their impact on business and strategic decisions- political socio-cultural, legal, economic and global environment** | 1st week of Jan 2024 to  3rd week of Jan 2024 | ……. |
| **Unit 2** | **Globalised business environment: Meaning and rationale for globalisation, composition and direction of FDI, WTO and the trading blocks, opportunities and challenges for MNC’s in India, Indian foreign trade and its impact on BOP.** | 4th week of Jan 2024 to 3rd week of Feb 2024 | 1stminor test in the 1st week Feb 2024.  1st assignment in the 2nd week Feb 2024. |
| **Unit 3** | **Concepts of economic systems, economic reforms, recent monetary and fiscal policy and their impact on business environment, privatisation in India, Public sector enterprises, MSME-growth, significance, problems and remedial.** | 4th week of Feb 2024 to 2nd week of Mar 2024 | 2ndminor test in the 1stweek Mar 2024. |
| **Unit 4** | **Social responsibility of business, social responsibility models, the evolving idea of social responsibility in Indian scenario, social audit- nature evolution and benefits, Ethics and business environment, corporate governance- factors influencing corporate governance, Regulatory framework.** | 3rd week of Mar 2024 to 1st week of Apr 2024 | 2nd assignment in the 3rdweek Feb 2024.  Viva-voice in the 1stweek Apr 2024.  **(Revision from 2nd of Apr 2024 till Exams)** |

**Govt. College, Hansi**

**Lesson Plan**

**Unit wise lesson plan for the Even Semester 2023-24**

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

**Subject: Research Methodology Section: ---**

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| **Unit No.** | **Description of Chapters/ Topic** | **Expected Duration** | **Assignment/Test** |
| **Unit 1** | **Introduction to business research, Formulation of the research problem and development of research hypothesis, Characteristics of good Research, Ethics in Business research, Research Process: Problem definition, Research Process, Research Design (Exploratory Research, Descriptive research and experimental Research)** | 1st week of Jan 2024 to  3rd week of Jan 2024 | ……. |
| **Unit 2** | **Data collection, measurement and scaling: secondary data collection methods, qualitative methods od data collection, attitude measurement and scaling and questionnaire designing. Sampling design: sampling concepts, sampling techniques, sample size determination and data processing.** | 4th week of Jan 2024 to 3rd week of Feb 2024 | 1stminor test in the 1st week Feb 2024.  1st assignment in the 2nd week Feb 2024. |
| **Unit 3** | **Preliminary data analysis and interpretation: Univariate and bivariate analysis of data, testing of hypothesis, analysis of variance techniques (one way and 2 way ANNOVA), Non parametric tests (Chi square test, Run test, one sample and 2 sample sign test, Man whitney U test, Wilcoxon signed rank test and Kruskal-walis test).** | 4th week of Feb 2024 to 2nd week of Mar 2024 | 2ndminor test in the 1stweek Mar 2024. |
| **Unit 4** | **Advance data analysis techniques: correlation and regression analysis, Factor analysis, discriminant analysis, cluster analysis and multidimensional scaling. Report writing and presentation of results.** | 3rd week of Mar 2024 to 1st week of Apr 2024 | 2nd assignment in the 3rdweek Feb 2024.Viva-voice in the 1stweek Apr 2024.**(Revision from 2nd of Apr 2024 till Exams)** |

**Government College Hansi**

**Unit wise Lesson Plan for Odd Semester, 2023-2024**

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

Subject: **Economic Development& Policy** in IndiaPaper: **Theory**

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| **Unit** | **Description of Chapter/Topic** | **Duration** | **Assignment/Test** |
| **Unit 1** | Features of Indian Economy since Independence and colonial rule, Trends in National Income, SectorialComposition, Economics Development under policy regimes | 1stweek of January to 4th week ofJanuary | Verbal Test |
| **Unit 2** | Demographic Features of Indian Population and National Population policy, Human Development Indicators | 1st week of toFebruary3rdweek of Feb | 1st Assignment in 3rd week of Feb |
| **Unit 3** | Trends in Saving and Investment, Problem of Poverty and Unemployment in India, Income and Regional Inequalities, Sustainable Development | 4thweek of Feb to 2nd week of March | Class test of 1st week of March |
| **Unit 4** | New Economy Policy, Industrial Policy, Disinvestment and Financial Sector Reforms and Banking Reforms. | 3rd week of March1stweek of April | 2nd Assignment in the 4th week of March |
| **Revision** | Revision, problem solving | 2nd week of and 3rd week of April |  |

Name of Teacher: Ms. Bhateri Class: B.A2nd semester

Subject: Economics Paper: Principal Of Microeconomics

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| **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, Allocative Efficiency Under PC | 1st week of  January to 3rd week of Jan | Verbal Test |
| **Unit-2** | Monopoly Market :-Firm Equilibrium and Price Determinent under Monopoly Market  Remedies for Monopoly, Anti trust law | 4th week of Janto 3rdWeek of February | 1stAssignment in 1stweek of February |
| **Unit-3** | Monopolistic Competition, Oligopoly Market  Consumer and producer theory in Action, Market Success and Faliure | 4thweek of Februaryto 3rd week March. | Class test in the 1st week of 4th week of February |
| **Unit-4** | Determinant of Factors Income:-Wages, Rent, Interest | 4th week of March to 1stweek April | 2ndAssignement in the 4thweek of April. |
| **Revision** | Revision and problem solving | 2ndweek of April to 3rdweek of April. |  |

Name of Teacher:MsBhateri Class: B.Com 2nd semester

Subject: Economics Paper: Macroeconomics

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| **Unit** | **Description of Chapter / Topics** | **Duration** | **Assignment / Test** |
| **Unit-1** | Nature and, scope of Macroeconomics, National Income, Criculur flow of Income, Income Determination in open and closed Economice. Effective Demand | 1stweek of January to 4th week  January | Verbal Test |
| **Unit-2** | Classical Economics:-Says law, Equilibrium output and Employment, Keynes modal of Income Determination  Consumption Function, APC, MPC, Consumption Hypothesis, Permanent Income and Relative Hypothesis, Life Cycle Hypothesis. | 2nd week of Jan to 4rh week of Feb | Assignment in 2nd week Jan |
| **Unit-3** | Saving And Investment, Concept of Investment multiplier, Principal of Acceleration and Super Multiplier, Business Cycle | 1stweek of Marchto 4th week March | 1st test in the 1st week of March . |
| **Unit-4** | Nature and definition of Money, Keynesyan theory of Monet, Supply of Money, Concept of Inflation, Phillips curve | 1st week of April to 3rdweek of April | 2nd test in 1st week of April |
| **Revision** | Revision and problem solving | 1st week of April | Viva and Presentation |

Name of Teacher: MsBhateri Class: B.A 4th Semester

Subject: Economics Paper: Principal Of Macroeconomics

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| **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 | 1st week of January to 3rd week of January | -- |
| **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 Jan to 3rd week of February | Class test in 1st week of feb |
| **Unit-3** | Tread Cycle:Meaning, Phases, Samuelson and Hicks Model, Monetary and Fiscal Policies for Stablization | 4th week of Feb to 2nd week of March | Assignment-1stin 2nd week of March |
| **Unit-4** | Balance of Payment and Exchange Rate | 3rd and 4th week of March | Verbal test and 2 nd assignment |
| **Revision** | Revision and problem solve | 1st and 2nd week of April |  |

**CLASS:BA (Second Semester)**

**NAME OF TEACHER: DR. HONEY SETHI SUBJECT:ENGLISH**

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| **UNITS** | **TIME PERIOD** | **TOPICS** | **TESTS ANDASSIGNMENTS** | **REMARKS** |
|  | 01JAN-15FEB. | Chapter-1Chapter-2  WithExercise &Grammar | Assignment1 |  |
|  | 16FEB.-05MAR. | Chapter-3  Chapter-4  WithExercise &Grammar | Test |  |
|  | 06MAR. – 05APR. | Chapter-5Chapter-6  WithExercise &Grammar | Assignment 2 |  |
|  | 06APR.-15APR.  16APR.-TillExam. | Chapter-7  Chapter-8  WithExercise &Grammar  Revision |  |  |

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| **UNITS** | | | **TIME PERIOD** | | **TOPICS** | **TESTS ANDASSIGNMENTS** | **REMARKS** | |
|  | | | 01JAN. -10JAN. | | Chapter-1  WithExercise &Grammar |  |  | |
|  | | | 11 JAN.-05FEB. | | Chapter-2  WithExercise&Grammar | Assignment1 |  | |
|  | | | 06FEB.–31MAR. | | Chapter-3  WithExercise &Grammar | Test |  | |
|  | | | 01APR.-11APR. | | Chapter-4  WithExercise &Grammar | Assignment 2 |  | |
|  | 12APR.-20APR.  21 APR-TillExam. | | Chapter-5  WithExercise &Grammar  **Revision** | |  |  |

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| **DRAMA** | **TIMEPERIOD** | **TOPICS** | **TESTS ANDASSIGNMENTS** | **REMARKS** |
| **THE MERCHANT OF VENICE** | 01JAN-31 JAN. | Indetail: |  |  |
|  |  |  |
|  |  | ACT-1 |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  | With a topic of Grammar |
|  | 01FEB.-29 FEB. | Indetail: |  |  |
|  |  | Assignment1 |
|  | ACT-2 |  |
|  |  |  |
|  |  |  |
|  | With a topic of Grammar |  |
|  |  |  |
|  | 01MAR.-15MAR. | Indetail: |  |  |
|  |  | Test |
|  | ACT-3 |  |
|  |  |  |
|  |  |  |
|  | With a topic of Grammar |  |
|  |  |  |
| . | 16 MAR.-31 MAR. | Indetail: |  |  |
|  |  |  | Assignment2 |
|  |  | ACT-4 |  |
|  |  |  |  |
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|  |  | With a topic of Grammar |  |
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| **DRAMA** | **TIMEPERIOD** | **TOPICS** | **TESTS ANDASSIGNMENTS** | **REMARKS** |
|  | 01 APR.-20 APR.  21APR.-TillExam. | Indetail:  ACT-5  With a topic of Grammar  **Revision** |  |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **UNITS** | **TIME PERIOD** | **TOPICS** | **TESTS ANDASSIGNMENTS** | **REMARKS** |
|  | 01JAN. -27JAN. | Chapter-1  Chapter-2  WithExercise &Grammar |  |  |
|  | 28 JAN.-29FEB. | Chapter-3  Chapter-4  WithExercise&Grammar | Assignment1 |  |
|  | 01MAR.–15MAR. | Chapter-5  WithExercise &Grammar | Test |  |
| . | 16MAR.-15APR.  16APR-TillExam. | Chapter-6  WithExercise &Grammar  **Revision** | Assignment 2 |  |

**Govt. College, Hansi**

**Lesson Plan**

**Unit wise lesson plan for the Even Semester 2023-2024**

**Teacher : DR. MUKESH KUMAR Class : B.AIII**

**6th Semester**

**Subject :English Section : A & C**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Description of Chapters/ Topic** | **Expected Duration** | **Assignment/Test** |
|  | **Introduction to thePlaywright William Shakespeare**  **Introduction to the Drama and its form**  **Introduction to Major Characters of the play**  **Explanation with Reference to the Context :**  **Act 1 Scene i**  **Act 1 Scene ii**  **Act 1 Scene iii** | 1stweek of January to4th week of January | 1st assignment in the last week of January |
|  |  |  |  |
|  | **Explanation with Reference to the Context**  **Act II Scene i**  **Act II Scene ii**  **Act II Scene iii**  **Act II Scene iv**  **Act II Scene v**  **Act II Scene vi**  **Act II Scene vii**  **Act II Scene viii**  **Act II Scene ix**  **Explanation with Reference to the Context:**  **Act III Scene i**  **Act III Scene ii**  **Act III Scene iii**  **Act III Scene iv**  **Act III Scene v**  **Act IV Scene i**  **Act IV Scene ii**  **Act V Scene i**  **Grammar Composition :**  **Precis Writing**  **Summarising and Abstracting**  **One Word Substitution**  **Correspondence**  **Comprehension** | 1st week of Februaryto last weekof February  1st week of March to last week of march  1st week of April | Minor test in the Second week ofFebruary  Secondassignment in the third week of March  **Grammar composition Practices in April** |

**Teacher: DR. MUKESH KUMAR Class : B.A Ist**

**Subject :**English  **Section: E**

|  |  |  |  |
| --- | --- | --- | --- |
| **Unit No.** | **Description of Chapters/ Topic** | **Expected Duration** | **Assignment/Test** |
| **Unit 1** | **Introduction to the Short Story**  **1. Pigeons at Daybreak**  **Anita Desai**  **2.With the Photographer**  **Stephen Leacock**  **3.The Journey**  **Temsula Ao**  **Grammar composition :**  **Sentence**  **Auxiliaries**  **Modals** | 1st week of January to 4th week of January | 1st assignment in the lastweek January |
| **Unit 2** | **4.The Refugee**  **K. A. Abbas**  **5.Bellows for the Bulloock**  **A Haryanvi Folk TaleTranslated by Jasbir S. Hooda**  **6.Panchlight**  **Phanishwar Nath Renu** | 1st week of February to last week of February | Minor test in the second week of February |
| **Unit 3** | **7.The Child**  **Premchand**  **The Blind Dog**  **R.K.Narayan** | **1st week of March to last week of March** | 2nd assignment in the last week March |
| **Unit 4** | **Grammar composition :**  **Subject -verb Agreement**  **Voice: Active and PassiveVoice**  **Direct and Indirect Speech**  **Phrasal Verb**  **Tag Questions**  **Homonyms Homophones**  **Paronyms**  **Punctuation** | 1st week of April | **Grammar composition : Practices in April** |

**Teacher:DR.MUKESHKUMAR** **Class:B.C.A.Ist**

**Subject:**English **(2ndsem)**

| **Personality:Definition,Elements,Determinants.**  **PersonalGrooming:PersonalHygiene,SocialEffectiveness,BusinessEtiquettes(PowerDressing).** | 1st.weekofJanuaryto  3rdweekofJanuary | 1stassignmentinthebeginningoffirstweekofJanuary |
| --- | --- | --- |
| **BodyLanguage:Non-VerbalCommunication,TypesofBodyLanguage,FunctionsofBodyLanguage,**  **RoleofBodyLanguage,Proxemics.**  **ArtofGoodCommunication:Verbal&Non-VerbalCommunication,DifferencebetweenOraland**  **WrittenCommunication,7'CsofEffective** | 4thweekofJanuaryto3rdweekofFebruary | MinortestinthefirstweekofFebruary |
| **Team:TeamBehaviour,TypesofTeams,TeamRolesandBehaviour.**  **GroupDiscussion:Do'sandDon't.** | 4thweekofFebruaryto  2nweekdofMarch | 2ndassignmentinthelastweekofMarch |
| **InterviewPreparation:Introduction,ResumeWriting,DressCode,Mock-Interview,Howtobe**  **successfulinanInterview.** | 3rdweekofMarchtoLastweekofMarch | **RevisiontheSyllabusinApril** |

**Teacher:DR.MUKESHKUMAR** **Class:B.AII**

**Subject:**English **Section:C&D(4thsem)**

| **UnitNo.** | **DescriptionofChapters/Topic** | **ExpectedDuration** | **Assignment/Test** |
| --- | --- | --- | --- |
| **Unit1** | **SpokenEnglish**  **TheEnvoy**  **TheSwanSong** | 1stweekofJanuaryto3rdweekofJanuary | 1stassignmentinthebeginningoffirstweekofJanuary |
| **Unit2** | **TheMonkey'sPaw**  **BeforeBreakfast** | 4thweekofJanuaryto2ndweekofFebruary | MinortestinthefirstweekofFebruary |
| **Unit3** | **TheSleepwalker**  **Grammar:Translation**  **Composition:Email,Resume,**  **Dialogue,LetterWriting,ReviewofLiterature** | 3rdweekofFebruaryto  LastweekofMarch | 2ndassignmentinthelastweekofMarch |
| **Unit4** | **ParagraphWriting**  **&**  **Revisionofthesyllabus** | InthemonthofApril |  |

Government College, Hansi………Unit wise Lesson Plan for the Even Semester, **2023-24**

Name of the Teacher: **Dr. Raj Kumar**

Class: **B.A. 6thSemester** 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 | 1stWeek of January to 1stWeek of February, 2024 | 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 | 2nd Week of February to Last Week of February |  |
| Unit 3 | Introduction to Geographical Information System: Definition, Purpose, Advantages and Software & Hardware Requirements; Application of GIS in Various Fields of Geography | 1stWeek of March to 3rdWeek of March | 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 | 1stWeek of April to 4thWeek of April | 2nd Assignment |
| Revision | All Four Units | Up to the commencement of examinations |  |

Government College, Hansi………Unit wise Lesson Plan for the Even Semester, **2023-24**

Name of the Teacher: **Dr. Raj Kumar**

Class: **B.A. 6thSemester** 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 | 1stWeek of January to 4thWeek of January, 2024 | ….. |
| Unit 2 | Demarcation of Scale of Aerial Photographs; Interpretation of Single Vertical Photographs, | 1stWeek of February to 2ndWeek of February | …. |
| Unit 3 | Use of Stereoscope and Identification of Features; Identification of Features on IRSID, LISS III imagery (Mark copy of FCC) | 3rdWeek of February to 2ndWeek of March | …. |
| Unit 4 | Scio-economic Survey and Report Writing | 3rdWeek of March to 2ndWeek of April | ….. |

**Government College, Hansi**

**Unit wise Lesson Plan for the Even Semester, 2023-24**

**Name of the Teacher: Sh. DHARMVIR**

**Class: B.A. 2nd SemesterSubject: Geography Paper: Theory**

|  |  |  |  |
| --- | --- | --- | --- |
| **Unit** | **Description of Chapters/Topics** | **Duration** | **Assignment/Test** |
| **Unit 1** | **1. Definition, Nature, scope and fields of Physical Geography.**  **2. Interior of the earth, Geological time scale and rocks.** | **1st Week of January to 3rd Week of January** | **1st Assignment in the third Week of January** |
| **Unit 2** | **3. Earth movements; folds and faults; earth quakes and volcanoes.**  **4. Theory of Isostasy; Wegner's theory of continental drift and Plate tectonic theory.** | **4th Week of January to 4th Week of February** | **Minor Test in the Last Week of February** |
| **Unit 3** | **5. Weathering; processes and its types.**  **6. Mass-movements; causes, its types and impacts.** | **1st Week of March to 2nd Week of March** | **2nd Assignment in the Last Week of March** |
| **Unit 4** | **7. Cycle of erosion; concepts and theories of W.M. Davis and Penck.**  **8. Processes and landforms of Wind, River, Underground water, and Glaciers.** | **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, 2023-24**

**Name of the Teacher: Sh. DHARMVIR**

**Class: B.A. 2nd Semester Subject: Geography Paper: Practical**

|  |  |  |  |
| --- | --- | --- | --- |
| **Unit** | **Description of Chapters/Topics** | **Duration** | **Assignment/**  **Test** |
| **Unit 1** | **1. Introduction to Topographical Sheets**  **India and adjacent countries**  **Degree Sheet**  **Half Degree Sheet**  **Quarter Degree Sheet**  **Conventional Signs** | **1st Week of January to 4th Week of January** | **…..** |
| **Unit 2** | **2. Methods of representing relief**  **3. Representation of Topographical features by contours. Slopes (Concave, convex, undulating and terraced) Valleys (V Shaped, U shaped, Gorge, Re-entrant) Ridges (Conical hill, Volcanic hill, Plateau, Escarpment) Complex features (waterfall, sea cliff, overhanging cliff, Fiord coast)** | **1st Week of February to 4th Week of February** | **….** |
| **Unit 3** | **4. Drawing of Profiles**  **(a) Cross Profiles: Serial, superimposed, projected and composite profiles.**  **(b) Longitudinal profiles** | **1st Week of March to 3rd Week of March** | **….** |
| **Unit 4** | **Chain and Tape Survey.** | **4th Week of March to 2nd Week of April** | **…..** |
| **Revision** | **Revision, Problem Solving & Viva Preparation** | **3rd Week of April to Commencement of Exams** | **…..** |

Name of the Teacher: Dharmvir

Class: **BA** Subject: **Geography** 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, Introduction, characteristics, features, structure and function of different ecosystem such as forest ecosystem, Grassland ecosystem, Desert ecosystem, Aquatic ecosystem. Biodiversity: Introduction, Definition: genetic spices and ecosystem diversity, bio-geographical classification of India, Ecosystem & biodiversity services: ecological, economic, social, consumptive use, productive use, social ethical, aesthetic and options values ,Biodiversity at global, national and local level, India as a mega diversity nation Global Hot spot of biodiversity, threats to biodiversity, habit loss, poaching of wildlife, man wildlife conflicts, Biological invasions, Endangered and endemic spices of India, Conservation of biodiversity: In-situ and ex-situ conservation of biodiversity | **1st Week of January to 3rd Week of January** | **1st Assignment in the third Week of January** |
| **Unit 2** | Renewable and renewable resources, Natural resources and associated problems, Forest resources: Use and over exploitation, deforestation, case studies, Timber extraction, mining dams and their effects on forest and tribal people, Water resources , use and over utilization of surface and ground water, floods, droughts conflicts over water dams benefits and problems, Mineral resources, Use and exploitation, environmental effects of extracting and mineral resources, food resources, World food resources, changes caused by agriculture and overgrazing, effects of modern agriculture, fertilizer- pesticide problems, water logging, salinity, Energy resources: Growing energy needs, renewable and renewable energy resources, use of alternate energy resources, case studies, land resources, land as a resources, land degradation, man induced landslides, soil erosion and desertification | **4th Week of January to 4th Week of February** | **Minor Test in the Last Week of February** |
| **Unit 3** | Definition of Environmental Pollution, Causes effect and control measures of: Air Pollution, Water Pollution, soil pollution, noise pollution, Nuclear hazards and human health risks Solid waste management, Causes, effects and control measures of urban and industrial wastes, Pollution case studies, Disaster Management: Floods, Earthquake, Cyclone and landslides, climate changes, global warming, acid rain, ozone layer depletion, different laws related to environment: Environment Protection Act, Air (Prevention and control of pollution) Act, Water (Prevention and control of pollution) Act, Wildlife Protection Act, Forest Conservation Act, International agreement, Montréal and Kyoto Protocol and nature reserve, tribal population and human health | **1st Week of March to 2nd Week of March** | **2nd Assignment in the Last Week of March** |
| **Unit 4** | Concept of sustainability & sustainable development, water conservation, rain water harvesting, watershed management, Resettlement and rehabilitation of project affected persons, case studies, Environmental ethics, role of Indian and other religions and cultures in environmental conservation, Environmental communication and public awareness, case studies (e.g. CNG vehicles in Delhi) Human Population growth: Impact on environment, human health and welfare, Environmental movements, Chipko, Silent valley, Bishnois of Rajasthan., | **3rd Week of March to 3rd Week of April** | **…..** |
| **Revision** | Revision, presentation, problem solving | **Last Week of April to end of the semester** | **…..** |

**Government College, Hansi**

**Unit wise Lesson Plan for the Even Semester, 2023-24**

**Name of the Teacher: Sh. Sandeep Singh**

**Class: B.A. 2nd SemesterSubject: Geography Paper: Theory**

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| --- | --- | --- | --- |
| **Unit** | **Description of Chapters/Topics** | **Duration** | **Assignment/Test** |
| **Unit 1** | **1. Definition, Nature, scope and fields of Physical Geography.**  **2. Interior of the earth, Geological time scale and rocks.** | **1st Week of January to 3rd Week of January** | **1st Assignment in the third Week of January** |
| **Unit 2** | **3. Earth movements; folds and faults; earth quakes and volcanoes.**  **4. Theory of Isostasy; Wegner's theory of continental drift and Plate tectonic theory.** | **4th Week of January to 4th Week of February** | **Minor Test in the Last Week of February** |
| **Unit 3** | **5. Weathering; processes and its types.**  **6. Mass-movements; causes, its types and impacts.** | **1st Week of March to 2nd Week of March** | **2nd Assignment in the Last Week of March** |
| **Unit 4** | **7. Cycle of erosion; concepts and theories of W.M. Davis and Penck.**  **8. Processes and landforms of Wind, River, Underground water, and Glaciers.** | **3rd Week of March to 3rd Week of April** | **…..** |
| **Revision** | **Revision, Problem Solving & Quizzes** | **Last Week of April to end of the semester** | **…..** |

**Name of the Teacher: Sh. Sandeep Singh**

**Class: B.A. 2nd Semester Subject: Geography Paper: Practical**

|  |  |  |  |
| --- | --- | --- | --- |
| **Unit** | **Description of Chapters/Topics** | **Duration** | **Assignment/**  **Test** |
| **Unit 1** | **1. Introduction to Topographical Sheets**  **India and adjacent countries**  **Degree Sheet**  **Half Degree Sheet**  **Quarter Degree Sheet**  **Conventional Signs** | **1st Week of January to 4th Week of January** | **…..** |
| **Unit 2** | **2. Methods of representing relief**  **3. Representation of Topographical features by contours. Slopes (Concave, convex, undulating and terraced) Valleys (V Shaped, U shaped, Gorge, Re-entrant) Ridges (Conical hill, Volcanic hill, Plateau, Escarpment) Complex features (waterfall, sea cliff, overhanging cliff, Fiord coast)** | **1st Week of February to 4th Week of February** | **….** |
| **Unit 3** | **4. Drawing of Profiles**  **(a) Cross Profiles: Serial, superimposed, projected and composite profiles.**  **(b) Longitudinal profiles** | **1st Week of March to 3rd Week of March** | **….** |
| **Unit 4** | **Chain and Tape Survey.** | **4th Week of March to 2nd Week of April** | **…..** |
| **Revision** | **Revision, Problem Solving & Viva Preparation** | **3rd Week of April to Commencement of Exams** | **…..** |

Name of the Teacher: Sandeep Singh

Class: **BA** Subject: **Geography** 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, Introduction, characteristics, features, structure and function of different ecosystem such as forest ecosystem, Grassland ecosystem, Desert ecosystem, Aquatic ecosystem. Biodiversity: Introduction, Definition: genetic spices and ecosystem diversity, bio-geographical classification of India, Ecosystem & biodiversity services: ecological, economic, social, consumptive use, productive use, social ethical, aesthetic and options values ,Biodiversity at global, national and local level, India as a mega diversity nation Global Hot spot of biodiversity, threats to biodiversity, habit loss, poaching of wildlife, man wildlife conflicts, Biological invasions, Endangered and endemic spices of India, Conservation of biodiversity: In-situ and ex-situ conservation of biodiversity | **1st Week of January to 3rd Week of January** | **1st Assignment in the third Week of January** |
| **Unit 2** | Renewable and renewable resources, Natural resources and associated problems, Forest resources: Use and over exploitation, deforestation, case studies, Timber extraction, mining dams and their effects on forest and tribal people, Water resources , use and over utilization of surface and ground water, floods, droughts conflicts over water dams benefits and problems, Mineral resources, Use and exploitation, environmental effects of extracting and mineral resources, food resources, World food resources, changes caused by agriculture and overgrazing, effects of modern agriculture, fertilizer- pesticide problems, water logging, salinity, Energy resources: Growing energy needs, renewable and renewable energy resources, use of alternate energy resources, case studies, land resources, land as a resources, land degradation, man induced landslides, soil erosion and desertification | **4th Week of January to 4th Week of February** | **Minor Test in the Last Week of February** |
| **Unit 3** | Definition of Environmental Pollution, Causes effect and control measures of: Air Pollution, Water Pollution, soil pollution, noise pollution, Nuclear hazards and human health risks Solid waste management, Causes, effects and control measures of urban and industrial wastes, Pollution case studies, Disaster Management: Floods, Earthquake, Cyclone and landslides, climate changes, global warming, acid rain, ozone layer depletion, different laws related to environment: Environment Protection Act, Air (Prevention and control of pollution) Act, Water (Prevention and control of pollution) Act, Wildlife Protection Act, Forest Conservation Act, International agreement, Montréal and Kyoto Protocol and nature reserve, tribal population and human health | **1st Week of March to 2nd Week of March** | **2nd Assignment in the Last Week of March** |
| **Unit 4** | Concept of sustainability & sustainable development, water conservation, rain water harvesting, watershed management, Resettlement and rehabilitation of project affected persons, case studies, Environmental ethics, role of Indian and other religions and cultures in environmental conservation, Environmental communication and public awareness, case studies (e.g. CNG vehicles in Delhi) Human Population growth: Impact on environment, human health and welfare, Environmental movements, Chipko, Silent valley, Bishnois of Rajasthan., | **3rd Week of March to 3rd Week of April** | **…..** |
| **Revision** | Revision, presentation, problem solving | **Last Week of April to end of the semester** | **…..** |

**Government College, Hansi**

**Unit wise Lesson Plan for the Even Semester, 2023-24**

**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** | **…..** |

**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** | **Introducation 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** | **…..** |

Name of the Teacher: JITIN

Class: **BA** Subject: **Geography** 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, Introduction, characteristics, features, structure and function of different ecosystem such as forest ecosystem, Grassland ecosystem, Desert ecosystem, Aquatic ecosystem. Biodiversity: Introduction, Definition: genetic spices and ecosystem diversity, bio-geographical classification of India, Ecosystem & biodiversity services: ecological, economic, social, consumptive use, productive use, social ethical, aesthetic and options values ,Biodiversity at global, national and local level, India as a mega diversity nation Global Hot spot of biodiversity, threats to biodiversity, habit loss, poaching of wildlife, man wildlife conflicts, Biological invasions, Endangered and endemic spices of India, Conservation of biodiversity: In-situ and ex-situ conservation of biodiversity | **1st Week of January to 3rd Week of January** | **1st Assignment in the third Week of January** |
| **Unit 2** | Renewable and renewable resources, Natural resources and associated problems, Forest resources: Use and over exploitation, deforestation, case studies, Timber extraction, mining dams and their effects on forest and tribal people, Water resources , use and over utilization of surface and ground water, floods, droughts conflicts over water dams benefits and problems, Mineral resources, Use and exploitation, environmental effects of extracting and mineral resources, food resources, World food resources, changes caused by agriculture and overgrazing, effects of modern agriculture, fertilizer- pesticide problems, water logging, salinity, Energy resources: Growing energy needs, renewable and renewable energy resources, use of alternate energy resources, case studies, land resources, land as a resources, land degradation, man induced landslides, soil erosion and desertification | **4th Week of January to 4th Week of February** | **Minor Test in the Last Week of February** |
| **Unit 3** | Definition of Environmental Pollution, Causes effect and control measures of: Air Pollution, Water Pollution, soil pollution, noise pollution, Nuclear hazards and human health risks Solid waste management, Causes, effects and control measures of urban and industrial wastes, Pollution case studies, Disaster Management: Floods, Earthquake, Cyclone and landslides, climate changes, global warming, acid rain, ozone layer depletion, different laws related to environment: Environment Protection Act, Air (Prevention and control of pollution) Act, Water (Prevention and control of pollution) Act, Wildlife Protection Act, Forest Conservation Act, International agreement, Montréal and Kyoto Protocol and nature reserve, tribal population and human health | **1st Week of March to 2nd Week of March** | **2nd Assignment in the Last Week of March** |
| **Unit 4** | Concept of sustainability & sustainable development, water conservation, rain water harvesting, watershed management, Resettlement and rehabilitation of project affected persons, case studies, Environmental ethics, role of Indian and other religions and cultures in environmental conservation, Environmental communication and public awareness, case studies (e.g. CNG vehicles in Delhi) Human Population growth: Impact on environment, human health and welfare, Environmental movements, Chipko, Silent valley, Bishnois of Rajasthan., | **3rd Week of March to 3rd Week of April** | **…..** |
| **Revision** | Revision, presentation, problem solving | **Last Week of April to end of the semester** | **…..** |

**Government College, Hansi**

**Unit wise Lesson Plan for the Even Semester, 2023-24**

**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** | **…..** |

**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** | **Introducation 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** | **…..** |

Name of the Teacher: **Sh. Virender Sihag** Class: **BA**

Subject: **Geography** Paper: **Environmental Studies**

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| --- | --- | --- | --- |
| **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, Introduction, characteristics, features, structure and function of different ecosystem such as forest ecosystem, Grassland ecosystem, Desert ecosystem, Aquatic ecosystem. Biodiversity: Introduction, Definition: genetic spices and ecosystem diversity, bio-geographical classification of India, Ecosystem & biodiversity services: ecological, economic, social, consumptive use, productive use, social ethical, aesthetic and options values ,Biodiversity at global, national and local level, India as a mega diversity nation Global Hot spot of biodiversity, threats to biodiversity, habit loss, poaching of wildlife, man wildlife conflicts, Biological invasions, Endangered and endemic spices of India, Conservation of biodiversity: In-situ and ex-situ conservation of biodiversity | **1st Week of January to 3rd Week of January** | **1st Assignment in the third Week of January** |
| **Unit 2** | Renewable and renewable resources, Natural resources and associated problems, Forest resources: Use and over exploitation, deforestation, case studies, Timber extraction, mining dams and their effects on forest and tribal people, Water resources , use and over utilization of surface and ground water, floods, droughts conflicts over water dams benefits and problems, Mineral resources, Use and exploitation, environmental effects of extracting and mineral resources, food resources, World food resources, changes caused by agriculture and overgrazing, effects of modern agriculture, fertilizer- pesticide problems, water logging, salinity, Energy resources: Growing energy needs, renewable and renewable energy resources, use of alternate energy resources, case studies, land resources, land as a resources, land degradation, man induced landslides, soil erosion and desertification | **4th Week of January to 4th Week of February** | **Minor Test in the Last Week of February** |
| **Unit 3** | Definition of Environmental Pollution, Causes effect and control measures of: Air Pollution, Water Pollution, soil pollution, noise pollution, Nuclear hazards and human health risks Solid waste management, Causes, effects and control measures of urban and industrial wastes, Pollution case studies, Disaster Management: Floods, Earthquake, Cyclone and landslides, climate changes, global warming, acid rain, ozone layer depletion, different laws related to environment: Environment Protection Act, Air (Prevention and control of pollution) Act, Water (Prevention and control of pollution) Act, Wildlife Protection Act, Forest Conservation Act, International agreement, Montréal and Kyoto Protocol and nature reserve, tribal population and human health | **1st Week of March to 2nd Week of March** | **2nd Assignment in the Last Week of March** |
| **Unit 4** | Concept of sustainability & sustainable development, water conservation, rain water harvesting, watershed management, Resettlement and rehabilitation of project affected persons, case studies, Environmental ethics, role of Indian and other religions and cultures in environmental conservation, Environmental communication and public awareness, case studies (e.g. CNG vehicles in Delhi) Human Population growth: Impact on environment, human health and welfare, Environmental movements, Chipko, Silent valley, Bishnois of Rajasthan., | **3rd Week of March to 3rd Week of April** | **…..** |
| **Revision** | Revision, presentation, problem solving | **Last Week of April to end of the semester** | **…..** |

**Government College, Hansi**

**Unit wise Lesson Plan for Even Semester 2023-24**

**Department: History**

**Name of Teacher: Kishan Pal Class:BA-II Sem**

**Subject: HIST 103: History of India (600-1526 A.D.)**

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| --- | --- | --- | --- |
| **Unit** | **Description of Chapter / Topics** | **Duration** | **Assignment / Test** |
| **Unit-1** | Post-Gupta Period up to 750 A.D.: Pushyabhutis and Chalukyas Polity and Economy (750- 1206 A.D.), Tri-Parties Struggle Pratiharas, Palas and Rashtrakutas & Cholas; Indian form of Feudalism. Socio-Cultural Trends: Society, Culture and Literature during 600-1206 A.D. | 02Jan. to 2024 20Jan.2024 | 1st Assignment 18jan tak |
| **Unit-2** | Invasions of Mohmud Ghaznavi and Muhammad Ghori Rise and Expansion of Delhi Sultanate: Iltutmish, Balban, Ala-ud-din Khilji and Muhammad Tughlaq Down Fall and Fragmentation of Delhi Sultanate | 21Jan. 2024 to 10 Feb.2024 | Test 09Feb |
| **Unit-3** | Bahmani and Vijaynagar Kingdoms in South India. Delhi Sultanate: Administration, Ruling Classes and Society Economic Developments during Delhi Sultanate Religion and Culture: Bhakti and Sufi Movements, Art and Architecture. | 11Feb.2024 to 15 March2024 |  |
| **Unit-4** | Maps (India):Extent of Harsha's Empire .  Extent of Ala -ud din Khilji's Empire  Extent of Muhammad Tughlaq  Extent of Vijaynagar Empire Urban Centers under the Delhi Sultanate | 16 March2024 to 25 March 2024 |  |
| **Revision** | 25 March to 30 April All Unit Revision |  |  |

Name of Teacher: **Kishan Pal** Class: **B.A III**

Subject: **History** Paper: **Modern World**

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| **Unit** | **Description of Chapter/Topics** | **Duration** | **Assignment/Test** |
| **Unit-I** | American Revelation: Causes & Impact  French Revelation: Nature & Impact Growth of Liberalism in England: | 01 Jan to 10 Feb 2024 | Ist Assignment |
| **Unit-II** | Rise of Imperialism: Causes & Courses  World War-I Causes&Consequences  Paris Peace Settlement & its Consequences | 11 Feb to 10 March 2024 | IInd Assignment |
| **Unit-III** | Rise of Socialism & Bolshevik Revolution in Russia  Rise of Dictatorship: Nazism and Fascism  World War-II Causes & Consequences | 11 March to 10 April 2024 | IIIrd Assignment |
| **Unit-IV** | European on the Eve of French Revolution  Polarization of Countries before World War-I  European after Paris Peace Settlement  Polarization of Countries before World War-II | In Map Classes |  |
| **Revision** |  | April 24 |  |

**Government College, Hansi**

**Unit wise Lesson Plan for Even Semester 2023-24**

**Department: History**

**Name of Teacher: Baljeet Narwal Class:BA-II Sem**

**Subject: HIST 103: History of India (600-1526 A.D.)**

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| **Unit** | **Description of Chapter / Topics** | **Duration** | **Assignment / Test** |
| **Unit-1** | Post-Gupta Period up to 750 A.D.: Pushyabhutis and Chalukyas Polity and Economy (750- 1206 A.D.), Tri-Parties Struggle Pratiharas, Palas and Rashtrakutas & Cholas; Indian form of Feudalism. Socio-Cultural Trends: Society, Culture and Literature during 600-1206 A.D. | 02Jan. to 2024 20Jan.2024 | 1st Assignment 18jan tak |
| **Unit-2** | Invasions of Mohmud Ghaznavi and Muhammad Ghori Rise and Expansion of Delhi Sultanate: Iltutmish, Balban, Ala-ud-din Khilji and Muhammad Tughlaq Down Fall and Fragmentation of Delhi Sultanate | 21Jan. 2024 to 10 Feb.2024 | Test 09Feb |
| **Unit-3** | Bahmani and Vijaynagar Kingdoms in South India. Delhi Sultanate: Administration, Ruling Classes and Society Economic Developments during Delhi Sultanate Religion and Culture: Bhakti and Sufi Movements, Art and Architecture. | 11Feb.2024 to 15 March2024 |  |
| **Unit-4** | Maps (India):Extent of Harsha's Empire .  Extent of Ala -ud din Khilji's Empire  Extent of Muhammad Tughlaq  Extent of Vijaynagar Empire Urban Centers under the Delhi Sultanate | 16 March2024 to 25 March 2024 |  |
| **Revision** | 25 March to 30 April All Unit Revision |  |  |

**Department: History**

**Name of Teacher: Baljeet Narwal Class:BA-IV Sem**

**Subject: HIST 203 : Indian National Movement (Option-I) Paper- A (THEORY)**

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| **Unit** | **Description of Chapter / Topics** | **Duration** | **Assignment / Test** |
| **Unit-1** | Origins of the National Consciousness Founding of Indian National Congress and Moderates Extremists: Ideology, Programmes and Politics Home Rule Movement | 02Jan. to 2024 20Jan.2024 | 1st Assignment 18jan tak |
| **Unit-2** | Role of Mahatma Gandhi in Freedom Movement: Non-Cooperation Movement, Civil Disobedience Movement and Quit India Movement Ideology and Contribution of Revolutionaries with special reference to Bhagat Singh Subhash Chandra Bose and Indian National Army | 21Jan. 2024 to 10 Feb.2024 | Test 09Feb |
| **Unit-3** | Political Reforms: Acts of 1909 and 1919 Rise of Communal Politics: Muslim League – Ideology and Politics Poona Pact and the Act of 1935 Partition and Independence of India | 11Feb.2024 to 15 March2024 |  |
| **Unit-4** | Maps (India): Places of Important Sessions of Indian National Congress Areas and Centers of Home Rule Movement Areas and Centers of Civil Disobedience Movement Important Centers of Revolutionary Movement Areas and Centers of Quit India Movement | 16 March2024 to 25 March 2024 |  |
| **Revision** | 25 March to 30 April All Unit Revision |  |  |

**Government College Hansi**

Unit wise Lesson Plan for Odd Semester, 2023-2024 B.Sc.(H) 6th semester

Name of Teacher : Sandeep kumar

Semester: 6th. Subject: Mathematics Paper: Numerical analysis

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| Class : **B.Sc.(H)**  **6rdSemester**Subject:Unit 1 | Finite Differences operators and their relations. Finding the missing terms and effect of  error in a difference tabular values, Interpolation with equal intervals: Newton’s forward  and Newton’s backward interpolation formulae. Interpolation with unequal intervals:  Newton’s divided difference, Lagrange’s Interpolation formulae, Hermite Formula. | 1rd week of January 2024 to  4th  week of January 2024 | Verbly test |
| Unit 2 | Central Differences: Gauss forward and Gauss’s backward interpolation formulae,  Sterling, Bessel Formula.  Numerical Differentiation: Derivative of a function using interpolation formula | 1st week of february to2nd week of  February 2024 | First Assignememt |
| Unit 3 | Numerical Integration: Newton-Cote’s Quadrature formula, Trapezoidal rule, Simpson’s  one- third and three-eighth rule, Chebychev formula, Gauss Quadrature formula  Eigen Value Problems: Power method, Jacobi’s method, Given’s method, House-  Holder’s method, QR method, Lanczos method. | 3rd week of february to Ist week of march 2024 | Class test |

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| Unit 4 | .  Numerical solution of ordinary differential equations: Single step methods-  Picard’s method. Taylor’s series method, Euler’s method, Runge-Kutta Methods.  Multiple step methods; Predictor-corrector method, Modified Euler’s method,  Milne-Simpson’s method. | 2nd week of march to 4th week of march | 2nd Assignement in the third Week of march Minor test in the 2nd week of april |
| Revision |  | april |  |

**NAMEOFPAPER- OrdinaryDiff.Eqn.&LaplaceTransform**

PAPER CODE(for B.Sc) -CML-206 PAPERCODE(forB.A.)-BAMH-104

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| --- | --- | --- | --- |
| **SR.**  **NO.** | **MONTHS** | **PERIOD** | **TOPICS** |
| **1.** | **JANUARY** | **1st week 2ndweek 3rdweek**  **Lastweek** | 1. Geometricalmeaningofadifferentialequation. Exact differential equations, integrating factors. 2. Firstorderhigherdegreeequationssolvablefor x,y,p Lagrange’s equations,   **3** Clairaut’s equations. Equation reducible to Clairaut’s form.  **4**.Singular solutions. |
| **2.** | **FEBRUARY**  TEST AND ONE ASSIGNMENT | **1st week 2ndweek 3rdweek**  **Lastweek** | **1**Orthogonaltrajectories:inCartesiancoordinates and polar coordinates.   1. Self orthogonal family ofcurves.. Linear differential equations with constant coefficients. 2. Homogeneous linear ordinary differential equations. 3. Equationsreducible tohomogeneous |
| **3.** | **MARCH**  2ND ASSIGNMENT | **1st week 2ndweek 3rdweek**  **Lastweek** | 1. Lineardifferentialequationsofsecondorder: 2. Reductionto normal form. 3. Transformation of the equation by changing the dependent variable/ the independent variable. 4. Methodof variationsof parameters. |
| **4.** | **APRIL**  TEST | **1stweek**  **2nd week 3rd week Lastweek** | 1. Laplace Transforms – Existence theorem for Laplace transforms, Linear property of the Laplace transforms, Shifting theorems, 2. Laplacetransformsofderivativesandintegrals, 3. InverseLaplacetransforms,convolutiontheorem, 4. solution of ordinary differential equations using Laplace transform. |

**NAMEOFPAPER- OrdinaryDiff.Eqn.&LaplaceTransform**

PAPER CODE(for B.Sc) -CML-206 PAPERCODE(forB.A.)-BAMH-104

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| --- | --- | --- | --- |
| **SR.**  **NO.** | **MONTHS** | **PERIOD** | **TOPICS** |
| **1.** | **JANUARY** | **1st week 2ndweek 3rdweek**  **Lastweek** | 1. Geometricalmeaningofadifferentialequation. Exact differential equations, integrating factors. 2. Firstorderhigherdegreeequationssolvablefor x,y,p Lagrange’s equations,   **3** Clairaut’s equations. Equation reducible to Clairaut’s form.  **4**.Singular solutions. |
| **2.** | **FEBRUARY**  TEST AND ONE ASSIGNMENT | **1st week 2ndweek 3rdweek**  **Lastweek** | **1**Orthogonaltrajectories:inCartesiancoordinates and polar coordinates.   1. Self orthogonal family ofcurves.. Linear differential equations with constant coefficients. 2. Homogeneous linear ordinary differential equations. 3. Equationsreducible tohomogeneous |
| **3.** | **MARCH**  2ND ASSIGNMENT | **1st week 2ndweek 3rdweek**  **Lastweek** | 1. Lineardifferentialequationsofsecondorder: 2. Reductionto normal form. 3. Transformation of the equation by changing the dependent variable/ the independent variable. 4. Methodof variationsof parameters. |
| **4.** | **APRIL**  TEST | **1stweek**  **2nd week 3rd week Lastweek** | 1. Laplace Transforms – Existence theorem for Laplace transforms, Linear property of the Laplace transforms, Shifting theorems, 2. Laplacetransformsofderivativesandintegrals, 3. InverseLaplacetransforms,convolutiontheorem, 4. solution of ordinary differential equations using Laplace transform. |

PAPER CODE(for B.Sc) -CML-607(i)

PAPERCODE(forB.A.)-BAMH-306(i)

CLASS:B.Sc./B.A.-IIIYearVISem

**NAME OF PAPER–REALAND COMPLEX ANALYSIS**

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| --- | --- | --- | --- |
| **SR. NO**  **.** | **MONTHS** | **PERIOD** | **TOPICS** |
| **1.** | **JANUARY** | 1st week 2nd week 3rd week Lastweek | 1Definition and examples of metric spaces, neighborhoods,   1. Limit points, interior points, open and closed sets, closure and interior, boundary points, 2. Subspaceofametric space,equivalentmetrics, 3. Cauchy sequences, completeness, Cantor’s intersection theorem. |
| **2.** | **FEBRUARY**  TEST & ONE ASSIGNMENT | 1st week 2nd week 3rd week Lastweek | 1. Baire’scategorytheorem,ContractionPrinciple, 2. Continuous functions, uniform continuity, compactness for metric spaces, 3. Sequential CompactnessBolzano- WeierstrassProperty, 4. Totalboundedness, finite intersection property, continuity in relation with compactness, connectedness. |
| **3.** | **MARCH**  TEST | 1st week 2nd week 3rd week Lastweek | 1Improper integrals and their convergence, comparison tests,   1. Abel’sand Dirichlet’s tests 2. Frullani’sintegral, 3. Integral as a function of a parameter. Continuity, differentiability and integrability of an integral of a function of a parameter. |
| **4.** | **APRIL**  2ND ASSIGNMENT | 1stweek  2nd week 3rd week Lastweek | 1. Topology of complex numbers: Trigonometric, exponential, logarithmic and hyperbolictrigonometric functions. 2. Extended complex plane, Stereographic projection of complex numbers Continuity and differentiabilityof complex functions. 3. Analytic functions, Cauchy-Riemann equations,.harmonic conjugates, harmonic functions 4. Construction of analytic functions: direct method and Milne-Thomson method |

PAPER CODE(for B.Sc) -CML-607(i) PAPERCODE(forB.A.)-BAMH-306(i)

CLASS:B.Sc./B.A.-IIIYearVISem

**NAMEOFPAPER–REALANDCOMPLEX ANALYSIS**

|  |  |  |  |
| --- | --- | --- | --- |
| **SR. NO**  **.** | **MONTHS** | **PERIOD** | **TOPICS** |
| **1.** | **JANUARY** | 1st week 2nd week 3rd week Lastweek | 1Definition and examples of metric spaces, neighborhoods,   1. Limit points, interior points, open and closed sets, closure and interior, boundary points, 2. Subspaceofametric space,equivalentmetrics, 3. Cauchy sequences, completeness, Cantor’s intersection theorem. |
| **2.** | **FEBRUARY**  TEST & ONE ASSIGNMENT | 1st week 2nd week 3rd week Lastweek | 1. Baire’scategorytheorem,ContractionPrinciple, 2. Continuous functions, uniform continuity, compactness for metric spaces, 3. Sequential CompactnessBolzano- WeierstrassProperty, 4. Totalboundedness, finite intersection property, continuity in relation with compactness, connectedness. |
| **3.** | **MARCH**  TEST | 1st week 2nd week 3rd week Lastweek | 1Improper integrals and their convergence, comparison tests,   1. Abel’sand Dirichlet’s tests 2. Frullani’sintegral, 3. Integral as a function of a parameter. Continuity, differentiability and integrability of an integral of a function of a parameter. |
| **4.** | **APRIL**  2ND ASSIGNMENT | 1stweek  2nd week 3rd week Lastweek | 1. Topology of complex numbers: Trigonometric, exponential, logarithmic and hyperbolictrigonometric functions. 2. Extended complex plane, Stereographic projection of complex numbers Continuity and differentiabilityof complex functions. 3. Analytic functions, Cauchy-Riemann equations,.harmonic conjugates, harmonic functions 4. Construction of analytic functions: direct method and Milne-Thomson method |

**Lesson Plan**

**Government College, Hansi**

**Unit wise Lesson Plan for Even Semester 2023-24**

**Department: Mathematics**

Name of Teacher: Amit Kumar Class: B.Sc. (NM) -II

Subject:Mechanics-I Paper: CML 407

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| --- | --- | --- | --- |
| **Unit** | **Description of Chapter / Topics** | **Duration** | **Assignment / Test** |
| **Unit-1** | Forces in two dimension (co-planner), triangle law and polygon law of forces, Lami’s theorem, resultant of concurrent and coplanar forces, conditions of equilibrium of concurrent forces. Parallel forces: like parallel and unequal unlike parallel forces, resultant and centre of parallel forces; Moments and Couples. | 02 January 2024 to 29 January 2023 | Oral Test |
| **Unit-3** | Velocity and acceleration along a plane curve, component of velocity and acceleration in radial, transverse, tangential and normal directions, Relative velocity and acceleration. Simple harmonic motion (SHM). | 30 January 2024 to 22February 2024 |  |
| **Unit-4** | Newton’s laws of motion, Central Orbits, differential equations of Central Orbits in polar form and in pedal form, areal velocity, elliptic, hyperbolic and parabolic orbit, velocity in a circle, apse and apsidal distances: definition and laws, velocity from infinity, Kepler’s laws of planetary motion, equivalence of Kepler’s laws of planetary motion and Newton’s law of gravitation, motion under the inverse square law. | 26 February 2024 to 14 March 2024 | Test |
| **Unit-2** | Forces in three dimensions, Poinsot’scentral axis, conditions for the reduction of a general system of forces in space to a single force, equations of central axis, Wrenches: Definition and basic laws, resultant wrench of two wrenches, locus of the central axis of two wrenches; Null lines and null planes. | 18 March 2024to 4 April 2024 | Assignment |
| **Revision** |  | 8 April 2024 to till exam | Test |

**Department: Mathematics**

Name of Teacher: Amit Kumar Class: B.Sc. (Hons) -II

Subject: Special Function-II Paper:BML406

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| --- | --- | --- | --- |
| **Unit** | **Description of Chapter / Topics** | **Duration** | **Assignment / Test** |
| **Unit-1** | Laguerre Polynomials: Laguerre’s equation and its solution, generating function, alternative expression for the Laguerre polynomials, explicit expressions and special values of the Laguerre polynomials, orthogonality properties of Laguerre polynomials, relation between Laguerre polynomials and their derivatives, recurrence relations, associated Laguerre polynomials, properties of the associated Laguerre polynomials | 02 January 2024 to 22 February 2024 |  |
| **Unit-2** | Hypergeometric functions: The hypergeometric series, an integral formula for the hypergeometric series, the hypergeometric equation, linear relation between the solutions of the hypergeometric equation, relation of contiguity, the confluent hypergeometric function, generalized hypergeometric series. | 26 February 2024to 4 April 2024 | Test and Assignment |
| **Revision** |  | 8 April 2024 to till exam | Test |

**Department: Mathematics**

Name of Teacher: Amit Kumar Class: B.Sc. (NM) -I

Subject: Mathematics Lab-1I

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| **Unit** | **Description of Chapter / Topics** | **Duration** |
| **Unit-1** | Part A: Introduction to Programming in C Strings: Character data type, Standard string handling functions, arithmetic operations on characters. Structures: definition, using structures, use of structures in arrays and arrays in structures, Functions.  **Part B:**  01 Program to add two matrices.  02 Program to multiply two matrices.  03. Program to find the inverse of a matrix. | Ist week of January  to 3rd week of January 2024 |
| **Unit-2** | 04. Program to find transpose of a matrix.  05. Program to find the sum of a series.  06. Program to sort an entire array using bubble short.  07 Program to find trace of 3X3 Matrix. | 4th week of January to 3rd week of February 2024 |
| **Unit-3** | 08 Program to find largest of three numbers using function.  09. Program to find factorial of a number using recursion.  10 Program to generate n Fibonacci terms using recursion. | 4th week of February to 3rd week of March 2024 |
| **Unit-4** | 11. Program to count number of vowels and consonants in a given sentence.  12. Program to print a salary chart for employee of a company.  14. Program to check a number is Armstrong or not.  15. Program to convert a number to its binary equivalent. | 4th Week of March to till Exam |

**Department: Mathematics**

Name of Teacher: Amit Kumar Class: B.A. -I

Subject: Mathematics Lab-1I

|  |  |  |
| --- | --- | --- |
| **Unit** | **Description of Chapter / Topics** | **Duration** |
| **Unit-1** | Part A: Introduction to Programming in C Strings: Character data type, Standard string handling functions, arithmetic operations on characters. Structures: definition, using structures, use of structures in arrays and arrays in structures, Functions.  **Part B:**  01 Program to add two matrices.  02 Program to multiply two matrices.  03. Program to find the inverse of a matrix. | Ist week of January  to 3rd week of January 2024 |
| **Unit-2** | 04. Program to find transpose of a matrix.  05. Program to find the sum of a series.  06. Program to sort an entire array using bubble short.  07 Program to find trace of 3X3 Matrix. | 4th week of January to 3rd week of February 2024 |
| **Unit-3** | 08 Program to find largest of three numbers using function.  09. Program to find factorial of a number using recursion.  10 Program to generate n Fibonacci terms using recursion. | 4th week of February to 3rd week of March 2024 |
| **Unit-4** | 11. Program to count number of vowels and consonants in a given sentence.  12. Program to print a salary chart for employee of a company.  14. Program to check a number is Armstrong or not.  15. Program to convert a number to its binary equivalent. | 4th Week of March to till Exam |

**Department: Mathematics**

Name of Teacher: Amit Kumar Class: B.Sc. -II

Subject: Mathematics Lab-IV

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| **Unit** | **Description of Chapter / Topics** | **Duration** |
| **Unit-1** | 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. | Ist week of January  to 3rd week of January 2024 |
| **Unit-2** | 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. | 4th week of January to 3rd week of February 2024 |
| **Unit-3** | 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 | 4th week of February to 3rd week of March 2024 |
| **Unit-4** | 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. | 4th Week of March to till Exam |

**Lesson Plan**

**Government College, Hansi**

**Unit wise Lesson Plan for Even Semester 2023-24**

**Department: Mathematics**

Name of Teacher:Dr.AnkurBala Class:B.Sc.II- 4thSem

Subject: Mathematics Paper:P.D.E.

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| **Unit** | **Description of Chapter / Topics** | **Duration** | **Assignment / Test/Remarks** |
| **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. | 02-01-2024 to  25-01-2024 |  |
| **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. Method of separation of variables: Solution of Laplace’s equation, Wave equation (one and two dimensions), Diffusion (Heat) equation (one and two dimension) in Cartesian Co-ordinate system. | 29-01-2024 to  20-02-2024 |  |
| **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, Cauchy’s problem for second order partial differential equations, Characteristic equations and characteristic curves of second order partial differential equation. | 21-02-2024 to  22-03-2024 | Holy Vacations 23-03-2024 to 31-03-2024 |
| **Unit-4** | Series solution of differential equations – Power series method. Bessel equation and its solution: Bessel functions and their properties-Convergence, recurrence, Relations and generating functions, Orthogonality of Bessel functions. Legendre differential equation and its solution: Legendre function and its properties-Recurrence Relations and generating functions. Orthogonality of Legendre polynomial. Rodrigues’ Formula for Legendre Polynomial. | 01-04-2024 to  20-04-2024 |  |
| **Revision** | Revision of the Syllabus | 21-04-2024 to  Exam |  |

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

Subject: Mathematics Paper:Statics

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| **Unit** | **Description of Chapter / Topics** | **Duration** | **Assignment / Test/Remarks** |
| **Unit-1** | Composition and Resolution of forces, Parallel forces, Moments and Couples | 02-01-2024 to  25-01-2024 |  |
| **Unit-2** | Analytical conditons of equilibrium of coplanar forces, friction, centre of gravity | 29-01-2024 to  20-02-2024 |  |
| **Unit-3** | Virtual Work, Forces in three dimension, Poinsots Central Axex | 21-02-2024 to  22-03-2024 | Holy Vacations 23-03-2024 to 31-03-2024 |
| **Unit-4** | Wrenches, Null Lines and Null Planes , Stable and Unstable Equilibrium. | 01-04-2024 to  20-04-2024 |  |
| **Revision** | Revision of the Syllabus | 21-04-2024 to  Exam |  |

Name of Teacher:Ankur Bala Class: B.Sc.Ist andB.A. 1st(2nd Sem)

Subject: Mathematics Paper:Vector Calculus

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| **Unit** | **Description of Chapter / Topics** | **Duration** | **Assignment / Test/Remarks** |
| **Unit-1** | Scalar and vector product of three vectors, product of four vectors.Reciprocal vectors. Vector differentiation Scalar Valued point functions, vector valued point functions, derivative along a curve, directional derivatives.Gradient of a scalar point function, geometrical interpretation of grad .Divergence and curl of vector point function. | 02-01-2024 to  25-01-2024 |  |
| **Unit-2** | Gradient, divergence and curl of sums and product and their related vector identities.Laplacian operator.Orthogonal curvilinear coordinates Conditions for orthogonality fundamental triad of mutually orthogonal unit vectors. Gradient, Divergence, Curl and Laplacian operators in terms of orthogonal curvilinear coordinates, Cylindrical co-ordinates and Spherical co-ordinates. | 29-01-2024 to  20-02-2024 |  |
| **Unit-3** | Vector integration: Indefinite Integral, Definite Integral,Standard results of Integration.Line integral, Surface integral, Volume integral. Gauss Divergence Theorem, Divergence Theorem in Cartesian Co-ordinates, Green Theorem, Stoke’s Theorem(Relation between line Integral and Surface Integral). Stoke’s Theorem in Cartesian form. Green’s Theorem in Plane as special case of Stoke’s Theorem, problems based on these theorems. | 21-02-2024 to  22-03-2024 | Holy Vacations 23-03-2024 to 31-03-2024 |
| **Unit-4** | 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.Polar equation of a conic, tangent and normal to the conic.Sphere: Plane section of a sphere. Sphere through a given circle. Intersection of two spheres, Cones. Right circular cone.Cylinder: Right circular cylinder. | 01-04-2024 to  20-04-2024 |  |
| **Revision** | Revision of the Syllabus | 21-04-2024 to  Exam |  |

Name of Teacher: Dr. AnkurBala&Dr.Priyanka Class:B.Sc.III-6thSem

Subject:Mathematics Paper: Linear Algebra

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| **Unit** | **Description of Chapter / Topics** | **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. | 02-01-2024 to  25-01-2024 |  |
| **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, annihilator of subspaces of finite dimentionalvactor spaces, Null Space, Range space of a linear transformation, Rank and Nullity Theorem. | 29-01-2024 to  20-02-2024 |  |
| **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. | 21-02-2024 to  22-03-2024 | Holy Vacations 23-03-2024 to 31-03-2024 |
| **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. | 01-04-2024 to  20-04-2024 |  |
| **Revision** | Revision of the Syllabus | 21-04-2024 to  Exam |  |

Name of Teacher: Dr. AnkurBala Class: B.A.III-6thSem

Subject: Mathematics Paper:**Solid Geometry**

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| **Unit** | **Description of Chapter / Topics** | **Duration** | **Assignment / Test/Remarks** |
| **Unit-1** | Composition and Resolution of forces, Parallel forces, Moments and Couples | 02-01-2024 to  20-02-2024 |  |
| **Unit-2** | Analytical conditons of equilibrium of coplanar forces, friction, centre of gravity | 21-02-2024 to  20-04-2024 |  |
| **Revision** | Revision of the Syllabus | 21-04-2024 to  Exam |  |

**Lesson Plan**

**Government College, Hansi**

**Unit wise Lesson Plan for Even Semester 2023-24**

**Department: Mathematics**

Name of Teacher:Dhanesh Kumar Class:B.Sc.I (H)- 2ndSem

Subject: Mathematics Paper:Calculus

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| **Unit** | **Description of Chapter / Topics** | **Duration** | **Assignment / Test/Remarks** |
| **Unit-1** | Definition of the limit of a function. Basic properties of limits, Continuous functions and classification of discontinuities. Differentiability. Successive differentiation. Leibnitz theorem. Maclaurin and Taylor series expansions. | 02-01-2024 to  25-01-2024 |  |
| **Unit-2** | Asymptotes in Cartesian coordinates, intersection of curve and its asymptotes, asymptotes in polar coordinates. Curvature, radius of curvature for Cartesian curves, parametric curves, polar curves. Newton’s method. Radius of curvature for pedal curves. Tangential polar equations. Centre of curvature. Circle of curvature. Chord of curvature, evolutes. Tests for concavity and convexity. Points of inflexion. Multiple points. Cusps, nodes & conjugate points. Type of cusps. | 29-01-2024 to  20-02-2024 |  |
| **Unit-3** | Tracing of curves in Cartesian, parametric and polar co-ordinates. Reduction formulae. Rectification, intrinsic equations of curve. | 21-02-2024 to  22-03-2024 | Holy Vacations 23-03-2024 to 31-03-2024 |
| **Unit-4** | Quadrature (area) Sectorial area. Area bounded by closed curves. Volumes and surfaces of solids of revolution. Theorems of Pappu’s and Guilden. | 01-04-2024 to  20-04-2024 |  |
| **Revision** | Revision of the Syllabus | 21-04-2024 to  Exam |  |

Name of Teacher:Dhanesh Kumar Class:B.Sc.I (H)- 2ndSem

Subject: Mathematics Paper:Calculus

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| **Unit** | **Description of Chapter / Topics** | **Duration** | **Assignment / Test/Remarks** |
| **Unit-1** | Definition of the limit of a function. Basic properties of limits, Continuous functions and classification of discontinuities. Differentiability. Successive differentiation. Leibnitz theorem. Maclaurin and Taylor series expansions. | 02-01-2024 to  25-01-2024 |  |
| **Unit-2** | Asymptotes in Cartesian coordinates, intersection of curve and its asymptotes, asymptotes in polar coordinates. Curvature, radius of curvature for Cartesian curves, parametric curves, polar curves. Newton’s method. Radius of curvature for pedal curves. Tangential polar equations. Centre of curvature. Circle of curvature. Chord of curvature, evolutes. Tests for concavity and convexity. Points of inflexion. Multiple points. Cusps, nodes & conjugate points. Type of cusps. | 29-01-2024 to  20-02-2024 |  |
| **Unit-3** | Tracing of curves in Cartesian, parametric and polar co-ordinates. Reduction formulae. Rectification, intrinsic equations of curve. | 21-02-2024 to  22-03-2024 | Holy Vacations 23-03-2024 to 31-03-2024 |
| **Unit-4** | Quadrature (area) Sectorial area. Area bounded by closed curves. Volumes and surfaces of solids of revolution. Theorems of Pappu’s and Guilden. | 01-04-2024 to  20-04-2024 |  |
| **Revision** | Revision of the Syllabus | 21-04-2024 to  Exam |  |

Name of Teacher:Dhanesh Kumar Class:B.Sc.II (H)- 4thSem

Subject: Mathematics Paper:Solid Geometry

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| **Unit** | **Description of Chapter / Topics** | **Duration** | **Assignment / Test/Remarks** |
| **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. | 02-01-2024 to  25-01-2024 |  |
| **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. | 29-01-2024 to  20-02-2024 |  |
| **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. | 21-02-2024 to  22-03-2024 | Holy Vacations 23-03-2024 to 31-03-2024 |
| **Unit-4** | Cauchy’s problem for second order partial differential equations, Characteristic equations and characteristic curves of second order partial differential equation, Method of separation of variables: Solution of Laplace’s equation, Wave equation (one and two dimensions), Diffusion (Heat) equation (one and two dimension) in Cartesian Co-ordinate system. | 01-04-2024 to  20-04-2024 |  |
| **Revision** | Revision of the Syllabus | 21-04-2024 to  Exam |  |

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

Subject:Mathematics Paper: Real and Complex Analysis

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| **Unit** | **Description of Chapter / Topics** | **Duration** | **Assignment / Test/Remarks** |
| **Unit-1** | Jacobians, Beta and Gama functions, Double and Triple integrals, Dirichlets integrals, change of order of integration in double integrals. | 02-01-2024 to  25-01-2024 |  |
| **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. | 29-01-2024 to  20-02-2024 |  |
| **Unit-3** | Extended Complex Plane, Stereographic projection of complex numbers, continuity and differentiability of complex functions, Analytic functions, Cauchy-Riemann equations. Harmonic functions. | 21-02-2024 to  22-03-2024 | Holy Vacations 23-03-2024 to 31-03-2024 |
| **Unit-4** | Mappings by elementary functions: Translation, rotation, Magnification and Inversion. Conformal Mappings, Mobius transformations. Fixed pints, Cross ratio, Inverse Points and critical mappings. | 01-04-2024 to  20-04-2024 |  |
| **Revision** | Revision of the Syllabus | 21-04-2024 to  Exam |  |

**Lesson Plan**

**Government College, Hansi**

**Unit wise Lesson Plan for Even Semester 2023-24**

**Department: Mathematics**

Name of Teacher: Priyanka Class: B.C.A. I(2ndSem)

Subject: Mathematics Paper:**Computer Oriented Numerical Methods**

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| **Unit** | **Description of Chapter / Topics** | **Duration** | **Assignment / Test/Remarks** |
| **Unit-1** | Floating Point representation of numbers, Airthematic operations with normalized floating point numbers and their consequences, Significant Figures. Error in numbers and iterative methods. | 02-01-2024 to  29-01-2024 |  |
| **Unit-2** | Solutions of Simultaneous Linear system of equations and ordinary differential equations. | 30-01-2024 to  20-02-2024 |  |
| **Unit-3** | Interpolation and Approximation | 21-02-2024 to  21-03-2024 |  |
| **Unit-4** | Numerical Differentiation and Integration | 22-03-2024  To  20-04-2024 |  |
| **Revision** |  | 21-04-2024 to  Exam |  |

**Department: Mathematics**

Name of Teacher: Priyanka Class: B.C.AI-2nd Sem

Subject: Mathematics Paper:**Solid Geometry**

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| **Unit** | **Description of Chapter / Topics** | **Duration** | **Assignment / Test/Remarks** |
| **Unit-1** | Composition and Resolution of forces, Parallel forces, Moments and Couples | 02-01-2024 to  20-02-2024 |  |
| **Unit-2** | Analytical conditons of equilibrium of coplanar forces, friction, centre of gravity | 21-02-2024 to  20-04-2024 |  |
| **Revision** | Revision of the Syllabus | 21-04-2024 to  Exam |  |
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Name of Teacher:Priyanka Class: B.A -II

Subject: Mechanics-I

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| **Unit** | **Description of Chapter / Topics** | **Duration** | **Assignment / Test** |
| **Unit-1** | Forces in two dimension (co-planner), triangle law and polygon law of forces, Lami’s theorem, resultant of concurrent and coplanar forces, conditions of equilibrium of concurrent forces. Parallel forces: resultant and centre of parallel forces; Moments and Couples. | 02 January 2024 to 29 January 2023 | Oral Test |
| **Unit-3** | Velocity and acceleration along a plane curve, component of velocity and acceleration in radial, transverse, Relative velocity and acceleration. Simple harmonic motion (SHM). | 30 January 2024 to 22 February 2024 |  |
| **Unit-4** | Newton’s laws of motion, Central Orbits, differential equations of Central Orbits in polar form and in pedal form, areal velocity,Kepler’s laws of planetary motion, equivalence of Kepler’s laws of planetary motion and Newton’s law of gravitation, motion under the inverse square law. | 26 February 2024 to 14 March 2024 | Test |
| **Unit-2** | Forces in three dimensions, Poinsot’scentral axis, conditions for the reduction of a general system of forces in space to a single force, equations of central axis, Wrenches: resultant wrench of two wrenches, locus of the central axis of two wrenches; Null lines and null planes. | 18 March 2024 to 4 April 2024 | Assignment |
| **Revision** |  | 8 April 2024 to till exam | Test |

**NAMEOFPAPER–Dynamics**

**PAPERCODE-BML-605**

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| **SR.**  **NO.** | **MONTHS** | **PERIOD** | **TOPICS** | **Assignment/test** |
| **1.** | **1st** | **1stweek &2ndweek 3rdweek &**  **Lastweek** | 1. Velocity and acceleration along radial, transverse,tangentialandnormaldirections. 2. Relative velocity and acceleration. Simpleharmonicmotion.Elasticstrings. | 04/03/24 |
| **2.** | **2nd** | **1st week 2nd week 3rd week Lastweek** | 1. Mass,Momentumand Force. 2. Newton’s lawsofmotion. 3. Work,Powerand Energy. 4. Definitions of Conservative forces and Impulsive forces. |  |
| **3.** | **3rd** | **1stweek &**  **2ndweek 3rdweek &**  **Lastweek** | 1. Motiononsmoothandroughplanecurves. 2. Projectilemotionofaparticleinaplane. Vector angular velocity. |  |
| **4.** | **4th** | **1stweek**  **2nd week 3rd week Lastweek** | 1. Generalmotionofarigidbody.Central Orbits, 2. Keplerlawsofmotion. 3. Motionofaparticleinthreedimensions. 4. Acceleration in terms of different co- ordinate systems. |  |

**Class-BSC(HONS.)Maths3 Teacher-Manish Gautam**

Class-Bsc3 NAME OFPAPER –MECHANICS II PAPER CODE(for B.Sc) -CML-606(i) Teacher-Manish Gautam

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| **SR.**  **NO** | **MONTHS** | **PERIOD** | **TOPICS** | **Assignment/test** |
| **1.** | **1st** | 1stweek  2ndweek  3rd week Lastweek | 1. Analyticalconditionsofequilibriumofco-planarforces: Equilibrium of three forces, conditions of equilibrium,   trigonometrictheorem’s,   1. conditions of equilibrium of co-planar forces (First, SecondandThirdform);Friction:Definitionoffrictionand basic laws, 2. problemsbasedonequilibriumofrodsandladders;Centre of gravity: Basic concepts and definitions, 3. centreofgravityofauniformrod,athinuniformlaminain the form of a parallelogram, a thin uniform triangularlamina, three uniform rods forming a triangle, a uniform quadrilateral lamina, lamina in the form of a trapezium,   centreofgravityofabodybyintegration. | 04/03/24 |
| **2.** | **2nd** | 1st week 2ndweek 3rd week  Lastweek | 1. Motion of a particle attached to an elastic string, . Hooke’slaw,motionofhorizontalandverticalelastic strings 2. Definitionofwork,Powerand Energy, 3. workdonebyavariableforce,workdoneinstretching an elastic string, principle of work and energy 4. Conservativesystemofforces,principleofconservation ofenergy,impulseofaconstantforceandavariableforce |  |
| **3.** | **3rd** | 1stweek 2ndweek  3rd week Lastweek | 1Motionofaparticleonsmoothcurves,   1. motionontheoutsideandinsideofasmoothvertical circle, 2. cycloidalmotion, 3. motiononaroughcurveundergravity. |  |
| **4.** | **4th** | 1st week 2ndweek 3rd week  Lastweek | 1. Projectilemotionofaparticleinaplane,velocityatany point of the trajectory, 2. directionsofprojectionforaparticle,rangeandtimeof flight on an inclined plane,. 3. directionsofprojectionforagivenvelocityandagiven range; 4. range andtime offightdownaninclinedplane. |  |

Class-BA3

NAME OFPAPER –MECHANICS II PAPERCODE(forB.A.)-BAMH-305(I)Teacher - Manish Gautam

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| **SR.**  **NO** | **MONTHS** | **PERIOD** | **TOPICS** | **Assignment/test** |
| **1.** | **1st** | 1stweek  2ndweek  3rd week Lastweek | 1. Analyticalconditionsofequilibriumofco-planarforces: Equilibrium of three forces, conditions of equilibrium,   trigonometrictheorem’s,   1. conditions of equilibrium of co-planar forces (First, SecondandThirdform);Friction:Definitionoffrictionand basic laws, 2. problemsbasedonequilibriumofrodsandladders;Centre of gravity: Basic concepts and definitions, 3. centreofgravityofauniformrod,athinuniformlaminain the form of a parallelogram, a thin uniform triangularlamina, three uniform rods forming a triangle, a uniform quadrilateral lamina, lamina in the form of a trapezium,   centreofgravityofabodybyintegration. | 04/03/24 |
| **2.** | **2nd** | 1st week 2ndweek 3rd week  Lastweek | 1. Motion of a particle attached to an elastic string, . Hooke’slaw,motionofhorizontalandverticalelastic strings 2. Definitionofwork,Powerand Energy, 3. workdonebyavariableforce,workdoneinstretching an elastic string, principle of work and energy 4. Conservativesystemofforces,principleofconservation ofenergy,impulseofaconstantforceandavariableforce |  |
| **3.** | **3rd** | 1stweek 2ndweek  3rd week Lastweek | 1Motionofaparticleonsmoothcurves,   1. motionontheoutsideandinsideofasmoothvertical circle, 2. cycloidalmotion, 3. motiononaroughcurveundergravity. |  |
| **4.** | **4th** | 1st week 2ndweek 3rd week  Lastweek | 1. Projectilemotionofaparticleinaplane,velocityatany point of the trajectory, 2. directionsofprojectionforaparticle,rangeandtimeof flight on an inclined plane,. 3. directionsofprojectionforagivenvelocityandagiven range; 4. range andtime offightdownaninclinedplane. |  |

Class-BscH2NAMEOFPAPER–OperationsResearch-I PAPER CODE-BML-405 Teacher-Manish Gautam

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| **SR.**  **NO.** | **MONTHS** | **PERIOD** | **TOPICS** | **Assignment/test** |
| **1.** | **1st** | **1stweek**  **2ndweek 3rd week Lastweek** | 1. Definition,scope,methodologyandapplicationsof OR. Types of OR models. 2. Conceptofoptimization,LinearProgramming: Introduction, Formulation of a Linear Programming Problem (LPP), 3. RequirementsforanLPP,Advantagesand limitations of LP. 4. Graphical solution: Multiple, unbounded and infeasible solutions. | 04/03/24 |
| **2.** | **2nd** | **1st week 2ndweek 3rdweek**  **Lastweek** | 1. Principleofsimplexmethod:standardform,basic solution, basic feasible solution. 2. ComputationalAspectofSimplexMethod:Cases of unique feasible solution, no feasiblesolution, 3. multiplesolutionandunboundedsolutionand degeneracy. 4. TwoPhaseand Big- Mmethods. |  |
| **3.** | **3rd** | **1st week 2ndweek**  **3rd week Lastweek** | 1. Duality inLPP,primal-dual relationship. 2. Transportation Problem: Methods for finding basicfeasiblesolutionofatransportationproblem, 3. Modifieddistributionmethodforfindingthe optimum solution, 4. Unbalanced and degenerate transportation problems,transhipmentproblem,maximizationina transportation problem. |  |
| **4.** | **4th** | **1st week 2ndweek**  **3rdweek Lastweek** | 1. AssignmentProblem:SolutionbyHungarian method, 2. Unbalancedassignmentproblem,maximizationin an assignment problem, Crew assignment and Travelling salesmanproblem. 3. GameTheory:Twopersonzerosumgame,Game with saddle points, 4. theruleofdominance;Algebraic,graphicaland linear programming methods for solving mixed strategy games. |  |

**Lesson Plan**

**Government College, Hansi**

**Unit wise Lesson Plan for Even Semester 2023-24**

**Department: Mathematics**

Name of Teacher: Dr. Rahmaan Khan Class:B.Sc.III (H)-6th Sem

Subject:Mathematics Paper: Mathematical Modelling

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| **Unit** | **Description of Chapter / Topics** | **Duration** | **Assignment / Test/Remarks** |
| **Unit-1** | The process of Applied Mathematics: Mathematical modeling, need, techniques, classification and illustrative. | 02-01-2024 to  25-01-2024 |  |
| **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. | 29-01-2024 to  20-02-2024 |  |
| **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. | 21-02-2024 to  22-03-2024 | Holy Vacations 23-03-2024 to 31-03-2024 |
| **Unit-4** | Mathematical modeling through difference equations: need, basic theory, economics and finance, population dynamics and Genetics, probability theory and examples. | 01-04-2024 to  20-04-2024 |  |
| **Revision** | Revision of the Syllabus | 21-04-2024 to  Exam |  |

Name of Teacher: Dr. Rahmaan Khan Class: B.Sc.II (H)- 4th Sem

Subject: Mathematics Paper:Transform Techniques

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| **Unit** | **Description of Chapter / Topics** | **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. | 02-01-2024 to  25-01-2024 |  |
| **Unit-2** | **Finite Laplace transformation**: Definition and Properties, shifting and scaling theorem.  **Fourier transforms**: Linearity property, Shifting, Modulation, Convolution Theorem, Fourier Transform of Derivatives, Relations between Fourier transform and Laplace transform, Parseval’s identity for Fourier transforms, solution of differential Equations using Fourier Transforms. | 29-01-2024 to  20-02-2024 |  |
| **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. | 21-02-2024 to  22-03-2024 | Holy Vacations 23-03-2024 to 31-03-2024 |
| **Unit-4** | **Hankel Tranform**: Basic properties of Hankel transform, Basic Operational properties, Hankel transform of derivatives and some elementary functions, Relation between Fourier and Hankel transform with application to boundary value problem and PDE. | 01-04-2024 to  20-04-2024 |  |
| **Revision** | Revision of the Syllabus | 21-04-2024 to  Exam |  |

Name of Teacher: Dr. RahmaanKhan Class:B.Sc.III (H)-6thSem

Subject:Mathematics Paper: Linear Algebra

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| **Unit** | **Description of Chapter / Topics** | **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. | 02-01-2024 to  25-01-2024 |  |
| **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, annihilator of subspaces of finite dimentionalvactor spaces, Null Space, Range space of a linear transformation, Rank and Nullity Theorem. | 29-01-2024 to  20-02-2024 |  |
| **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. | 21-02-2024 to  22-03-2024 | Holy Vacations 23-03-2024 to 31-03-2024 |
| **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. | 01-04-2024 to  20-04-2024 |  |
| **Revision** | Revision of the Syllabus | 21-04-2024 to  Exam |  |

Name of Teacher: Dr. Rahmaan Khan Class:B.A.III -6th Sem

Subject:Mathematics Paper: Linear Algebra

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| **Unit** | **Description of Chapter / Topics** | **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. | 02-01-2024 to  25-01-2024 |  |
| **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, annihilator of subspaces of finite dimentional vactor spaces, Null Space, Range space of a linear transformation, Rank and Nullity Theorem. | 29-01-2024 to  20-02-2024 |  |
| **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. | 21-02-2024 to  22-03-2024 | Holy Vacations 23-03-2024 to 31-03-2024 |
| **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. | 01-04-2024 to  20-04-2024 |  |
| **Revision** | Revision of the Syllabus | 21-04-2024 to  Exam |  |

**NAMEOFPAPER**–MathematicsLab-III(Practical)

Class b. scIII Hons.

Name of the teacher Santosh devi

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| **SR.**  **NO.** | **MONTHS** | **PERIOD** | **TOPICS** |
| **1.** | **1st** | **1stweek&2ndweek**  **3rdweek& Last week** | 1. TointerpolatethedatausingNewton’sforward   interpolationformula   1. TointerpolatethedatausingNewton’sbackward   interpolationformula |
| **2.** | **2nd** | **1st week& 2nd week**  **3rdweek& Lastweek** | 1. TointerpolatethedatausingGauss’sforward   interpolationformula   1. TointerpolatethedatausingGauss’sbackward   interpolationformula |
| **3.** | **3rd** | **1st week& 2nd week**  **3rd week Lastweek** | 1. To interpolate the data using Lagrange’s interpolation formula 2. Tofindtherootsofalgebraicandtranscendental equations using Bisection method. 3. Tofindtherootsofalgebraicandtranscendentalequations using Regula-Falsi method. |
| **4.** | **4th** | **1st week& 2nd week**  **3rdweek& Last week** | 1. Tofindtherootsofalgebraicandtranscendentalequations using Secant method. 2. Tofindtherootsofalgebraicandtranscendentalequations using Newton-Raphson’s method.   . |

**NAMEOFPAPER–NumericalAnalysis-Lab**

Practical PAPERCODE-BMP-604

Name of the teacher Santosh devi

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| **S R. N**  **O.** | **MONTHS** | **PERIOD** | **TOPICS** |
| **1.** | **1st** | **1stweek 2ndweek**  **3rdweek &**  **Lastweek** | Programmingin C  1TointegratenumericallyusingTrapezoidal rule.   1. TointegratenumericallyusingSimpson’sone- third rule. 2. TointegratenumericallyusingSimpson’s three-eighth rule. |
| **2.** | **2nd** | **1stweek &**  **2ndweek**  **3rdweek &**  **Lastweek** | 1. To find numerical solution of ordinary differentialequationsbyEuler’smethod/ Modified Euler’smethod, 2. Taylor’sseriesMethod 3. **​**To find numerical solution of ordinary differential equations by Runge -Kuttamethod. |
| **3.** | **3rd** | **1stweek &**  **2ndweek**  **3rdweek &**  **Lastweek** | 1. To interpolate the data using Newton’s forward interpolation formula 2. To interpolate the data using Newton’s backward interpolation formula |
| **4.** | **4th** | **1stweek &**  **2nd week 3rd week Lastweek** | 1. To interpolate the data using Gauss’s forward interpolation formula 2. To interpolate the data using Gauss’s backward interpolation formula 3. TointerpolatethedatausingLagrange’sinterpolation formula |

Name of the teacher Santosh devi

**CLASS:-B.A-II PAPER:- P.D.E.& S.F.**

**SEM.:- IV**

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| **SR. NO.** | **MONTHS** | **PERIOD** | **TOPICS** |
| **1.** | **JANUARY** | **1st week**  **2nd week**  **3rd week**  **Last week** | **1.**Partial differential equations: Formation, order and degree.  **2.**Linear and non-linear partial differential equations of the first order: Complete solution.  **3.**Singular solution, General solution, Solution of Lagrange’s linear equations.  **4.**Charpit’s general method of solution, Compatible systems of first order equations, Jacobi’s method. |
| **2.** | **FEBRUARY** | **1st week**  **2nd week**  **3rd week**  **Last week** | **1.**Linear partial differential equations of second and higher orders. Linear and non-linear homogeneous equations with constant coefficients.  **2.** Partial differential equation with variable coefficients reducible to equations with constant coefficients.  **3.** Equations reducible to linear equations with constant coefficient.Classification of linear partial differential equations of second order, Hyperbolic.  Parabolic and elliptic types.  4. Reduction of second order linear partial differential equations to Canonical(Normal) forms and their solutions. |
| **3.** | **MARCH** | **1st week**  **3rd week**  **Last week** | **1.**Solution of linear hyperbolic equations, Monge’smethod.Cauchy’s problem. Characteristic equations and characteristic curves of second order partial differential equation.  **2.** Method of separation of variables : Solution of Laplace’s equation.  **3.** Series solution of differential equations – Power series method. |
| **4.** | **APRIL** | **1st week**  **2nd week**  **3rd week**  **Last week** | **1.**Bessel equation and its solution: Bessel functions.  **2.** Legendre differentials equations and and their solutions: Legendre functions.  REVISION  REVISION |

Name of Teacher:Santosh devi Class: B.A. -II

Subject: Mathematics Lab-IV

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| **Unit** | **Description of Chapter / Topics** | **Duration** |
| **Unit-1** | 1 To solve the system of linear equations using Gauss -elimination method.  2. To solve the system of linear equations using Gauss –Seida l iteration method. | Ist week of January  to 3rd week of January 2024 |
| **Unit-2** | 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. | 4th week of January to 3rd week of February 2024 |
| **Unit-3** | 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 | 4th week of February to 3rd week of March 2024 |
| **Unit-4** | 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. | 4th Week of March to till Exam |

**Lesson Plan**

**Government College, Hansi**

**Unit wise Lesson Plan for Even Semester 2023-24**

**Department: Physical Education**

Name of Teacher: Dr. RajniSaini Class: B.A. I

Subject:Physical Eduaction

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| **Unit** | **Description of Chapter / Topics** | **Duration** | **Assignment / Test** |
| **Unit-1** | introduction to Health Education .Meaning, Definition, Aim, Objectives and Scope of Health Education Meaning and Definition of Health Education .Aim and Objectives of Health Education .Scope of Health Education.Importance of Health Education in Modern Society Meaning, Aim, Objectives and General Principles of First Aid Meaning of First Aid  Aim and Objectives of First Aid. General Principles of First-Aid. First-Aid for Common Injuries. Snake Biting. Drowning Burns. Electric Shock. Bleeding  Nose Bleeding | 02 January 2024 to 29 January 2023 | Ist Assignment |
| **Unit-2** | Historical Prospects of Physical Education  Pre-Independence and Post-Independence Historical Development of Physical Education India.Pre- Independence Historical Development of Physical Education. Post- Independence Historical Development of Physical Education  Role of IOA, SAI, NSNIS and YMCA in the Development of Physical Education and Sports in India. Indian Olympic Association. Sports Authority of India.Netaji Subhash National Institute of Sports. Young Men's Cristiain Association. Haryana Sports Policy. National Sports Policy | 30 January 2024 to 22February 2024 | Unit Test-I |
| **Unit-3** | Introduction to Physical Fitness. Meaning, Definition and Importance of Physical Fitness  Meaning and Definition of Physical Fitness.  Importance of Physical Fitness. Components and Principles of Physical Fitness. Components of Physical Fitness. Principles of Physical Fitness  Factors Influencing Physical Fitness. Meaning of Isometric, Isotonic and Isokinetic | 23 February 2024 to 14 March 2024 | 2nd Assignment |
| **Unit-4** | Introduction to Human Anatomy and Physiology  Anatomy of Human Bone. Types and Functions of Bones in Human Body.Types of Bones.Functions of Bones.Meaning of Joints and its Types.Types of Freely Movable Joints or Synovial Joints | 15 March 2024 to 4 April 2024 | Unit Test-II |
| **Revision** |  | 5 April 2024 to till exam |  |

**Lesson Plan**

**Government College, Hansi**

**Unit wise Lesson Plan for Even Semester 2023-24**

**Department: Physical Education**

Name of Teacher: Dr. RajniSaini Class: B.A. II

Subject: Physical Eduaction

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| **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. | 02 January 2024 to 29 January 2023 | 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 | 30 January 2024 to 22 February 2024 | Unit Test-I |
| **Unit-3** | : Major Sports Events  (1) Ancient Olympic Games  (ii) Modern Olympic Games  (iii) Asian Games  (iv) Common Wealth Games | 23 February 2024 to 14 March 2024 | 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 | 15 March 2024 to 4 April 2024 | Unit Test-II |
| **Revision** |  | 5 April 2024 to till exam |  |

**Lesson Plan**

**Government College, Hansi**

**Unit wise Lesson Plan for Even Semester 2023-24**

**Department: Physical Education**

Name of Teacher: Dr. RajniSaini Class: B.A. III

Subject: Physical Eduaction

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| **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 | 02 January 2024 to 29 January 2023 | Ist Assignment |
| **Unit-2** | Concept of Sports Training and DopingMeaning and Definitions of Sports TrainingMeaning of Sports TrainingDefinitions of Sports TrainingFactors Affecting Sports TrainingTypes of Sports Training: Circuit Training, Interval Training and ContinuousTraining.Advantages of Circuit TrainingDoping: Meaning, Types and Its Effects on HealthMeaning of Doping. Types of DopingEffects of Doping on the Health | 30 January 2024 to 22 February 2024 | 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 | 23 February 2024 to 14 March 2024 | 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 | 15 March 2024 to 4 April 2024 | Unit Test-II |
| **Revision** |  | 5 April 2024 to till exam |  |

**Government College, Hansi (Hisar)**

Name of teacher—Mr. Sombir (Assistant Proff.) BPL 201, (Heat and Thermodynamics)

Subject- Physics Theory, Class –B.Sc. 1st  (Hons) Even Semester 2023-24

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| Unit | Description of chapter/topics | Duration | Assignment/test |
|  | Unit 1.  Zeroth and First Law of Thermodynamics: Extensive and intensive thermodynamic variables, Thermodynamic equilibrium, zeroth law and Concept of Temperature, Work and heat, State functions, First law of thermodynamics, Internal energy, Applications of first law, General relation between Cp and Cv, Work done during isothermal and adiabatic processes. Second Law of Thermodynamics: Reversible and Irreversible process with examples, Conversion of Work into Heat and Heat into Work, Heat Engines, Carnot’s Cycle, Carnot engine & its efficiency, Refrigerator & coefficient of performance, 2nd Law of Thermodynamics: Kelvin-Planck and Clausius Statements and their equivalence, Carnot’s Theorem | 1st jan 2024 to 1st week of Feb 2024 | Test of unit 1  After completion of unit 1 |
|  | Entropy and Third law of Thermodynamics: Concept of entropy, Clausius theorem, Clausius Inequality, Second Law of Thermodynamics in terms of Entropy, Entropy of a Perfect Gas and Universe, Entropy Changes in Reversible and Irreversible Processes, Principle of Increase of Entropy, Third Law of Thermodynamics, Unattainability of absolute zero,  T-S Diagrams, Phase Change, Classification of Phase Changes.  Revision, Problem Solving Classes | 2nd week of Feb onwards | Test after the completion of the 2nd unit  Assignment |

**Government College Hansi (Hisar)**

Class Teacher- Mr. Sombir (Assistant Proff.) Class –B.Sc. 3rd Year Even Semester 2023-24

Subject- Physics Theory, CPL 601 Solid State Physics & CPL 602 Quantum Mechanics

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| Unit | Description of chapter/topics | Duration | Assignment/test |
| 1-2 | Qunantum Mechanics  Unit 1 Basics of Quantum Mechanics: Wave function and its physical significance, Properties of wave-function, Orthogonality and Normalization of wave function, Time dependent Schrodinger wave equation, Time Independent Schrodinger Equation, Momentum and Energy operators; Hermitian Operators- Eigen value and Eigen functions, Commutator relations of various operators, Stationary states; Probabilities and normalization, Probability current densities and its relation to wave function, Expectation Values of Dynamical quantities, Particle in 1-dimention Infinite Square Well (Energy levels and general Wave function)  UNIT-2 Application of Schrodinger Wave Equation: Solution of Schrodinger Equation for the Finite Potential Well, 1-Dimention Harmonic Oscillator problem - Algebraic and Analytical solutions, Free particle and concept of group velocity, Tunneling through finite potential barrier - Examples of alpha decay and tunnel diodes (qualitative only), Generalized uncertainty principles for Position-Momentum and Energy | 1st Jan to 28st Jan 2024 | Test of unit  1 and 2,  28 jan 2024 |
| 3-4 | UNIT-3 Larmor’s precession, Spectroscopic terms and their notation, Selection rule, Orbital magnetic dipole moment (Bohr magneton), Coupling scheme; LS or Russel-Saunders Coupling scheme and JJ coupling scheme, Pauli principal, Hyperfine structure of spectral lines and its origin, isotopic effect, Atom in external magnetic field; Normal Zeeman effect  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 molecules, Molecules as Harmonic Oscillator | 29 Jan to 20 Feb 2024 | Test after the completion of the 2nd unit  1st assignment in February |
| 1-2 | Solid State Physics  Crystal Structure I: Crystalline and glassy forms, liquid crystals, crystal structure, periodicity, lattice and basis, crystal translational vectors and axes. Unit cell and Primitive Cell, Winger Seitz primitive Cell, symmetry operations for a two dimensional crystal, Bravais lattices in two and three dimensions. Crystal planes and Miller indices, Interplaner spacing, Crystal structures of Zinc Sulphide, Silicon, Sodium Chloride and Diamond.  UNIT- II 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. Lattice vibrations: Phonon concept, Vibration of monoatomic and diatomic lattice, Acoustical and optical modes, Dispersion relation for phonons, Dulong and Petit’s Law, Einstein and Debye theories of specific heat of solids, Debye T3 law. | 21 Feb to 16 March 2024 | Test after the completion of the unit 1st & 2nd |
| 3-4 | Unit III  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 Magnetic Properties of Matter: Dia-, Para-, Ferromagnetic Materials, Classical Langevin Theory of dia - and Paramagnetic Domains, Curie’s law.  UNIT- IV  Super Conductivity: Historical introduction, Survey of superconductivity, Super conducting systems, High Tc Super conductors, Isotopic Effect, Critical Magnetic Field, Meissner Effect, London Theory and Penetration Depth, Classification of Superconductors (type I and Type II), BCS Theory of Superconductivity, Flux quantization, Josephson Effect (AC and DC), Practical Applications of superconductivity and their limitations.  And Revision and problem solving | 18 March onwards till exams | Test after the completion of 3rd and 4th unit  2nd assignment |

**Lesson Plan**

**Government College, Hansi**

**Unit wise Lesson Plan for Even Semester-II-2024**

**Department: Physics**

Name of Teacher: Dr. Pawan Kumar Class: B.Sc.INM

Subject: Physics Paper: Electricity Magnetism EMT 2

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| **Unit** | **Description of Chapter / Topics** | **Duration** | **Assignment / Test** |
| **Unit-1** | Electromagnetic Induction. Motional EMF, Faraday's laws of electromagnetic induction, Self and mutual inductance (LCR), Energy stored in magnetic field.  AC Circuit Analysis. AC circuit analysis complex variables, AC circuits with (a) R and C (b) R and L (c) R, L and C. Series and parallel resonance circuits, Quality factors | 05-01-2024to  31-01-2024 |  |
| **Unit-2** | Maxwell's equations. Maxwell's fixing of Ampere's law, Displacement current, Maxwell's equations in vacuum, Maxwell's equation in matter, The continuity equation, polynting Theorem and Poynting vector, Momentum | 1-02-2024 to  29-02-2024 | Test |
| **Unit-3** | Sinusoidal waves, Wave equations for E and B fields, Electromagnetic wave propagation through vacuum and isotropic dielectric medium, transverse nature of EM waves, Energy and momentum in EM waves. | 01-03-2024 to  31-03-2024 | Assignment |
| **Unit-4** | Scalar and vector potential for electromagnetic fields, Gauge Transformation, Coulomb Gauge, Lorentz Gauge, Electric and magnetic dipole radiation (no derivation needed, discussion of results only). Magnetism as relativistic phenomenon, | 01-04-2024 to  30-4-2023 |  |
| **Revision** | Revision of the Syllabus | 1-5-2024 to  Exam |  |

**Government College, Hansi**

**Unit Wise Lesson Plan for Even Semester 2023-2024**

**Name of the Teacher: - Dr. Tamanna Rani**

**Class B.Sc. (4th Semester) Subject: - Physics (CPL-402),**

**Paper- Statistical Mechnics (Theory)**

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| **Unit** | **Description of 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 | First week of January to 3rd week of February | First assignment in First week of February |
| **Unit II**  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 | 4th week of February to 2nd week of March | Unit test in last week of March |
| **Unit III**  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. | 3rd week of March to 1st week of APRIL | Second assignment in last week of March |
| **Unit IV**  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. | 2nd week of April to 4th week of APRIL |  |
| **Revision, solution of queries, active participation of students** |  |  |  |

**Government College, Hansi**

**Unit Wise Lesson Plan for Even Semester 2023-2024**

**Name of the Teacher: - Dr. Tamanna Rani**

**Class B.Sc. (4th Semester) Subject: - Physics (CPL-403),**

**Paper- Wave AND Optics (Theory)**

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| **Unit** | **Description of 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. | First week of January to 3rd week of February | First assignment in First week of February |
| **Unit II**  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. | 4th week of February to 2nd week of march | Unit test in last week of March |
| **Unit III** 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. | 3rd week of March to 1st week of April | Second assignment in last week of APRIL |
| **Unit IV**  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 | 2nd week of April to 4th week of APRIL |  |
| **Revision, solution of queries, active participation of students** |  |  |  |

**Govt. college Hansi**

**Lesson plan.**

**Unit wise lesson plan for the Even Semester, 2023-2024**

**Teacher: Babita Chaudhary Class: BA 2nd**

**Section: --- A& B Subject: Indian political thinkers**

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| **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 | ……. |

**Govt. college Hansi**

**Lesson plan.**

**Unit wise lesson plan for the Even Semester, 2023-2024**

**Teacher: Babita Chaudhary Class: BA 1st**

**Section: --- A& B Subject: Indian politics**

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| **Unit** | **Description of chapters/topics** | **Duration** | **Assignment/Test** |
| **Unit 1** | **Federal nature and feature of Indian federalism , working of NITI ayog** | 1st week of January to last week of January | 1st assignment in the beginning of last week of January |
| **Unit 2** | Election commission, electoral reforms and problem of defection | 1st week of Feb to last week of Feb. | Minor test in the 2nd week of Feb. |
| **Unit 3** | Party system in india, pressure groups | 1st week of March to last week of March | 2nd assignment in the 2nd week of March |
| **Unit 4** | Role of caste , religion, language in Indian politics, emerging trends in Indian political system | 1st week of April to 15th April | 2nd test in 2nd week of April |
| **Revision** | Revision, presentation, problem solving | Last week of April | ……. |

**Govt. college Hansi**

**Lesson plan.**

**Unit wise lesson plan for the Even Semester, 2023-2024**

**Teacher: Babita Chaudhary Class: BA 3rd**

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

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| **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 | ……. |

Lesson Plan Government College, Hansi

Unitwise Lesson Plan for Even Semester 2023-24 Department:Psychology

NameofTeacher:Dr.Alka Class:B.A2nd sem

Subject: Psychology Paper:ExperimentalPsychology

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| **Unit** | **DescriptionofChapter/Topics** | **Duration** | **Assignment /Test** |
| **Unit-1** | Attention : Nature, Characteristics and Types  Psychophysics: Problems of Psychophysics and methods (Classical) | 02 January 2024 to 29 January 2024 | 1stassignmentinthe 2ndweek ofFebruary |
| **Unit-2** | Learning: Definitions, factors affecting of learning, Trail and Error theory,  Classical conditioning ,Insight learning and Operant Conditioning | 30 January 2024 to 25 February 2024 | MinorTestinthe 1st Week ofMarch |
| **Unit-3** | Memory: Definition, Stages, STM and LTM – Methods to Study Memory.  Forgetting: Factors Leading to Forgetting, Pneomonics | 26 February 2024 to 14 March 2024 |  |
| **Unit-4** | Problem Solving: Stages of Problem Solving, Convergent and Divergent thinking.  Statistics: Frequency Distribution, Graphical Presentation of Data, Measures of Central Tendencies | 15 March 2024 to 4 April 2024 | 2ndAssignmentinthe Last Week of March |
| **Revision** |  | 5 April 2024 to till exam |  |

Lesson PlanGovernmentCollege,Hansi

UnitwiseLessonPlanforEven Semester

2023-24

Department:Psychology

NameofTeacher:Dr.Alka Class:B.A4thSem

Subject:Psychology Paper: Developmental Psychology

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| **Unit** | **DescriptionofChapter/Topics** | **Duration** | **Assignment /Test** |
| **Unit-1** | Human Development; Concept and Principles Factors in  Human Development; Biological, Social and Cultural | 02 January 2024 to 29 January 2024 | 1stassignmentinthe 2ndweek ofFebruary |
| **Unit-2** | Prenatal Development, Determinants and Stages.  Infancy: Characteristics, Hazards and Adjustment | 30 January 2024 to 25 February 2024 | MinorTestinthe 1st Week ofMarch |
| **Unit-3** | Childhood: Characteristics, Perceptual, Motor, Emotional, Cognitive Development.  Adoloscents: Characteristics and Problems of Adoloscents and Adjustment | 26 February 2024 to 14 March 2024 |  |
| **Unit-4** | Adulthood: Early Adulthood, Late adulthood and Aging-Changing Patterns and Problems.  Measures of Variability: Quartile Deviation, Standard Deviation. | 15 March 2024 to 4 April 2024 | 2ndAssignmentinthe Last Week of March |
| **Revision** |  | 5 April 2024 to till exam |  |

Lesson Plan GovernmentCollege,Hansi

Unitwise Lesson Plan for Even Semester 2023-24

Department:Psychology

NameofTeacher:Dr.Alka Class:B.A 6thSem

Subject:Psychology Paper:Applied Psychology

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| **Unit** | **DescriptionofChapter/Topics** | **Duration** | **Assignment /Test** |
| **Unit-1** | Applied Psychology: Meaning, History, Fields, and Careers in Psychology.  Organizational Psychology: Nature, Scope, Objectives, and Development. | 02 January 2024 to 29 January 2024 | 1stassignmentinthe 2ndweek ofFebruary |
| **Unit-2** | Guidance: Objectives, Principles, Types of Guidance, Organization of Guidance Programme.  Counselling: Need, Principles, Special Areas, and Types of Counselling. | 30 January 2024 to 25 February 2024 | MinorTestinthe 1st Week ofMarch |
| **Unit-3** | Health Psychology: Meaning, Scope and Objectives; Concept of Health and Illness.  Psychological Factors in Physical Illness, Life Style and Health, Stress and Coping. | 26 February 2024 to 14 March 2024 |  |
| **Unit-4** | Forensic Psychology: Psychology and Law, Eyewitness Memory; Accuracy and Improvement.  Statistics: Correlation- Meaning, Rank Difference, and Product Moment Method. | 15 March 2024 to 4 April 2024 | 2ndAssignmentinthe Last Week of March |
| **Revision** |  | 5 April 2024 to till exam |  |

**jktdh; egkfo|ky;] gkalh & ikB ;kstuk**

**l= 2023&24 d{kk & Lukrd f}rh; ¼prqFkZ lsesLVj½**

**uke % Jh tksfxUnz flag] ,lksfl,V izksQslj fo”k; % laLd`r ¼,sfPNd½**

**?kVd fo”k; fnukad@eghuk**

?kVd&1 **j?kqoa’k& f}rh; lxZ** 02 tuojh ls 30 tuojh 2024 rd

**‘yksd O;k[;k** % ikB & Hkwfedk] lkj] ‘yksdksa

dh O;k[;k] iz’u bR;kfnA

?kVd&2 **f’kojkt fot; & izFke fu%’okl** 01 Qjojh ls 29 Qjojh 2024 rd

**‘yksd O;k[;k** % ikB & Hkwfedk] lkj] ‘yksdksa

dh O;k[;k] iz’u bR;kfnA

?kVd&3 **laLd`r O;kdj.k** 01 ekpZ ls 20 ekpZ 2024 rd

okP;] rf}r izR;;] f.ktUr rFkk lUuUr]

fo|kFkhZ iznRr dk;Z leh{kkA

?kVd&4 y?kqfl}kUrdkSeqnh 21 ekpZ ls 30 ekpZ 2024 rd

vuqokn@iqujko`fRr 01 vizSy ls ijh{kk rd

**jktdh; egkfo|ky;] gkalh & ikB ;kstuk**

**l= 2023&24 d{kk & Lukrd izFke ¼f}rh; lsesLVj½**

**uke % Jh tksfxUnz flag] ,lksfl,V izksQslj fo”k; % laLd`r ¼,sfPNd½**

**?kVd fo”k; fnukad@eghuk**

1. **Jhen~Hkxon~xhrk** & lkj] ‘yksdksa dh O;k[;k iz’u bR;kfnA 02 tuojh ls 30 tuojh 2024 rd
2. **uhfr’krde~** & lkj] ‘yksdksa dh O;k[;k] iz’u] 01 Qjojh ls 29 Qjojh 2024 rd

fo|kFkhZ iznRr dk;Z ,oa VSLV bR;kfnA

1. **laLd`r O;kdj.k** % ‘kCn :i] /kkrq :i] 01 ekpZ ls 30 ekpZ 2024 rd

fo|kFkhZ iznRr dk;Z bR;kfnA

1. **NUn ifjp;** 01 vizSy ls 15 vizSy 2024 rd

fgUnh ls laLd`r esa vuqokn@ikB~;Øe~ iqujko`fRr 16 vizSy ls ijh{kk ‘kqHkkjEHk rd

**jktdh; egkfo|ky;] gkalh & ikB ;kstuk**

**l= 2023&24 d{kk&Lukrd r`rh; ¼N”B lsesLVj½**

**uke % Jh tksfxUnz flag] ,lksfl,V izksQslj fo”k; % laLd`r ¼,sfPNd½**

**?kVd fo”k; fnukad@eghuk**

?kVd&1fnukad 02@01@24 ls 30@01@24 rd ukVd vfHkKku‘kkdqUrye~ iape vad ‘yksd O;k[;k iz’u lkj bR;kfnA

?kVd&2fnukad 01@02@24 ls 29@02@24 rd laLd`r lkfgR; dk bfrgkl&

?kVd&3fnukad 01@03@24 ls 15@03@24 rd egkdfo dkfynkl dh d`fr;ksa esa thou n`f”V] jk”Vªh; Hkkouk] izd`fr fp=.k vkSj vaydkj iz;ksxA

?kVd&4fnukad 16@03@24 ls 15@04@24 rd vfHkKku‘kkdqUrye~ “k”B ,oe~ lIre~ vad ‘yksd O;k[;k iz’u lkj bR;kfnA

?kVd&5fnukad 15@04@24 ls ijh{kk ‘kqHkkjEHk rd ikB~;Øe~ iqujko`fRrA

**पाठयोजनाबीएद्वितीयसामिसत्रसंस्कृतअनिवार्य**

दिनांक02/01/24से27/01/24–पद्यभाग।

दिनांक29/01/24 से 24/02/24 तकगद्यभाग-1st Assignment.

दिनांक26/02/24 से 22/03/24 तकव्याकरणशब्दरूपएवम्धातुरूपतथासन्धि-2nd Assignment.

दिनांक 01/04/24से 26/04/24तककारकतथाविभक्तिपरआधारितअनुवाद- Minor Test.

**पाठयोजनाबीएचतुर्थसामिसत्रसंस्कृतअनिवार्य**

दिनांक02/01/24से 27/01/24तकनाटकचारुदात्तमतृतीयअंक-1st Assignment

दिनांक29/01/24से 24/02/24तकनाटकचरुदत्तमचतुर्थअंक -2nd Assignment

दिनांक 26/02/24से 22/03/24तकव्याकरण- Minor Test.

दिनांक 01/04/24से 27/04/24तकव्याकरण।

दिनांक 29/04/24एवम् 30/04/24 पाठ्यक्रमपुनरावति।

**पाठयोजनाबीएषष्ठसामिसत्रसंस्कृतऐच्छिक**

दिनांक 02/01/24से 27/01/24तकनाटकअभिज्ञानशाकुन्तलपञ्चमअंक-1st Assignment. दिनांक 29/01/24से 24/02/24तकसंस्कृतसाहित्यकाइतिहास-2nd Assignment.

दिनांक 26/02/24से22/03/24तकमहाकविकालिदासकीकृतियोंमेंजीवनदृष्टिराष्ट्रीयभावनाप्रकृतिचित्रणऔरअलंकारप्रयोग-Minor Test.

दिनांक 01/04/24से 27/04/24तकअभिज्ञानशाकुन्तलषष्ठएवम्सप्तमअंक।

दिनांक 29/04/24एवम् 30/04/24 पाठ्यक्रमपुनरावर्ती।

**पाठयोजनाबीएषष्ठसामिसत्रसंस्कृतअनिवार्य**

दिनांक 02/01/24से 27/01/24 तकउपन्यासशिवराजविजयप्रथमनिश्वास- 1st Assignment

दिनांक 29/01/24से 24/02/24तकउपन्यासशिवराजविजयप्रथमनिश्वास-2nd Assignment

दिनांक 26/02/24 से 22/03/24तकसंस्कृतसाहित्यकाइतिहास।

दिनांक 01/04/24से 27/04/24तकसंस्कृतव्याकरण-Minor Test.

दिनांक 29/04/24तथा 30/04/24 पाठ्यक्रमपुनरावर्ती।

**Govt. college Hansi**

**Lesson plan.**

**Unit wise lesson plan for the Even Semester, 2023-2024**

**Teacher: Kumari Manju maan Class: BA 1st**

**Section: --- A& B Subject: Sanskrit elective**

|  |  |  |  |
| --- | --- | --- | --- |
| **Unit** | **Description of chapters/topics** | **Duration** | **Assignment/Test** |
| **Unit 1** | **Shrimadbhagwat Gita dwitiya adhyyay sarlarth sprasang vyakhaya bhaag** | 1st week of January to last week of January | 1st assignment in the beginning of last week of January |
| **Unit 2** | Niti Shatkam sarlarth saprasang vyakhyaa bhaag , Sukhtiya ki vyakhya | 1st week of Feb to last week of Feb. | Minor test in the 2nd week of Feb. |
| **Unit 3** | Sanskrit vyakaranam- shabd Rupani , dhaatu Rupani,Chandauli, Anuradha laghutramak parasan | 1st week of March to last week of March | 2nd assignment in the 2nd week of March |
| **Unit 4** | Syllabus revision | 1st week of April to 15th April | 2nd test in 2nd week of April |
| **Revision** | Revision, presentation, problem solving | Last week of April | ……. |

**Govt. college Hansi**

**Lesson plan.**

**Unit wise lesson plan for the Even Semester, 2023-2024**

**Teacher: Kumari Manju maan Class: BA 2nd**

**Section: --- A Subject: Sanskrit elective**

|  |  |  |  |
| --- | --- | --- | --- |
| **Unit** | **Description of chapters/topics** | **Duration** | **Assignment/Test** |
| **Unit 1** | **Kalidas raghuvansham ka dwitya sarg ki sprasang vyakhya and prashnotra** | 1st week of January to last week of January | 1st assignment in the beginning of last week of January |
| **Unit 2** | Shiv Raj Vijay ki saprasnag vyakhya and prashnotra | 1st week of Feb to last week of Feb. | Minor test in the 2nd week of Feb. |
| **Unit 3** | Sanskrit vyakaranam-vachya , tadvtya, andijant and sanant | 1st week of March to last week of March | 2nd assignment in the 2nd week of March |
| **Unit 4** | Laghusidhant komudi katanga prakaran or anuvaad | 1st week of April to 15th April | 2nd test in 2nd week of April |
| **Revision** | Revision, presentation, problem solving | Last week of April | ……. |

**Govt. college Hansi**

**Lesson plan.**

**Unit wise lesson plan for the Even Semester, 2023-2024**

**Teacher: Kumari Manju maan Class: B.Sc**

**Section: --- A Subject: Sanskrit compulsory**

|  |  |  |  |
| --- | --- | --- | --- |
| **Unit** | **Description of chapters/topics** | **Duration** | **Assignment/Test** |
| **Unit 1** | **Padya bhaag ki sprasang vyakhya or prasanotri** | 1st week of January to last week of January | 1st assignment in the beginning of last week of January |
| **Unit 2** | Gadya bhaag ki saprasang vyakhya or prasontra | 1st week of Feb to last week of Feb. | Minor test in the 2nd week of Feb. |
| **Unit 3** | Sanskrit vyakaran- dhaaturupani | 1st week of March to last week of March | 2nd assignment in the 2nd week of March |
| **Unit 4** | Sanskrit vyakaran- ach sandhi | 1st week of April to 15th April | 2nd test in 2nd week of April |
| **Revision** | Revision, presentation, problem solving | Last week of April | ……. |

**Lesson Plan**

**Government College, Hansi**

**Unit wise Lesson Plan for Even Semester (2023-24)**

**Department: Hindi**

**Name of Teacher : Dr. Sanjay Kumar Class: B.Sc. (2nd Year)**

**Subject: Hindi Section :**

|  |  |  |  |
| --- | --- | --- | --- |
| **Unit** | **Description of Chapter / Topics** | **Duration** | **Assignment / Test** |
| **Unit-I** | fo"k;xr ys[kd %& MkW jkedqekj oekZ] misUnz ukFk ^v'd\*] txnh'k panz ekFkqj] MkW- y{eh ukjk;.k yky] fo".kq izHkkdj] eksgu jkds'k dk thou ifjp; ,oa lizlax O;k[;k] iz'u mRrj | tuojh ds izFke lIrkg ls Qjojh ds f}rh; lIrkg rd | izFke iznr tuojh dk;Z] vafre lIrkg d{kk ijh{kk Qjojh izFke lIrkg |
| **Unit-II** | fuca/k ys[ku %& efgykf/kdkj] xk¡/kh n'kZu] f'k{kk vkSj jktuhfr] foKku vkSj Ik;kZoj.k iznw"k.k] fo'o fo[;kr oSKkfud vkSj muds vkfo"dkj] vkdk'kok.kh ¼jsfM;ks½] dEI;wVj rFkk baVjusV] tula[;k foLQksV | Qjojh r`rh; lIrkg ls ekpZ r`rh; lIrkg rd | ekSf[kd ijh{kk Qjojh vafre lIrkg iznRr dk;Z  f}rh; ekpZ f}rh; LkIrkg |
| **Unit-III** | i= ys[ku | ekpZ vafre lIrkg ls vizSy f}rh; lIrkg rd | f}rh; d{kk ijh{kk  vizSy izFke lIrkg |
| **Unit-IV** | oSKkfud 'kCnkoyh | vizSy r`rh; lIrkg ls vizSy vafre lIrkg rd | &&&& |
| **Revision** | iqujko`fÙk | ebZ izFke lIrkg ls | &&&& |

**Lesson Plan**

**Government College, Hansi**

**Unit wise Lesson Plan for Even Semester (2023-24)**

**Department: Hindi**

**Name of Teacher : Dr. Sanjay Kumar Class: B.A. II (Elective)**

**Subject: Hindi Section : EL**

|  |  |  |  |
| --- | --- | --- | --- |
| **Unit** | **Description of Chapter / Topics** | **Duration** | **Assignment / Test** |
| **Unit-I** | ys[kd & ujksRrenkl }kjk jfpr ^lqnkek pfjr\*] dh lizlax O;k[;k] thou ifjp;] iz'u mRrj | tuojh izFke lIrkg ls Qjojh ds f}rh; lIrkg rd | izFke iznr dk;Z] tuojh vafre lIrkg d{kk ijh{kk Qjojh izFke lIrkg |
| **Unit-II** | Js"B fuca/kdkjksa ds fuca/k izrki ukjk;.k feJ] vkpk;Z egkohj izlk f}osnh] vkpk;Z jke pUnz 'kqDy] ljnkj iwju flag] jkeo`{k csuhiqjh] uan nqykjs oktis;h] gtkjh izlkn f}osnh dk thou ifjp; | Qjojh r`rh; lIrkg ls ekpZ r`rh; lIrkg rd | ekSf[kd ijh{kk Qjojh vafre lIrkg iznRr dk;Z  f}rh; ekpZ f}rh; LkIrkg |
| **Unit-III** | fgUnh lkfgR; dk v/kqfud dky %& dfork  vk/kqfud dfork Øfed fodkl ifjos'k] HkkjrsUnq;qxhu ,oa f}osnh ;qxhu dfork dh izo`fr;ka Nk;kokn] izxfrokn] iz;ksxokn] u;h dfork] ledkfyu dfork ,oa iz'u mÙkj | ekpZ vafre lIrkg ls vizSy f}rh; lIrkg rd | f}rh; d{kk ijh{kk  vizSy r`rh; lIrkg |
| **Revision** | iqujko`fÙk | vizSy vafre lIrkg ls | &&&& |

**Lesson Plan**

**Government College, Hansi**

**Unit wise Lesson Plan for Odd Semester (2023-24)**

**Department: Hindi**

**Name of Teacher : Dr. Sanjay Kumar Class: B.A. II (4th Sem.)**

**Subject: Hindi Paper: Hindi**

**Section : A+B+D**

|  |  |  |  |
| --- | --- | --- | --- |
| **Unit** | **Description of Chapter / Topics** | **Duration** | **Assignment / Test** |
| **Unit-1** | dFkkd`e lSaik0] MkW0 jksfg.kh vxzoky % lkfgfR;d ifjp;] x|ka'kksa dh lizlax O;k[;k | tuojh&Qjojh | izFke iznr dk;Z Qjojh  f}rh; lIrkg Qjojh vfUre lIrkg d{kk ijh{kk |
| **Unit-2** | dFkkd`e % vkykspukRed iz'uksrj] y?kwjkRed] vfr y?kwjkRed iz'uksRrj | ekpZ | f}rh; iznrdk;Z ekpZ vfUre lIrkg |
| **Unit-3** | fgUnh lkfgR; dk vk/kqfud dky % x|&vk/kqfud dky dh ifjfLFkfr;k¡] HkkjrsUnq iwoZ fgUnh x|] miU;kl fgUnh dgkuh] ubZ dgkuh] ukVd] ,dkadh] iz'uksRrj | vizSy izFke&r`rh; lIrkg | vizSy izFke lIrkg d{kk&ijh{kk |
| iqujko`fÙk | ikfjHkkf"kd 'kCnkoyh % y?kwjkRed iz'uksRrj mijksDr iqujko`fr | vizSy vfUre lIrkg |  |

**Lesson Plan**

**Government College, Hansi**

**Unit wise Lesson Plan for Odd Semester 2023-24**

**Department: Hindi**

**Name of Teacher : Dr. Sanjay Kumar Class: B.A. III (6th Sem.)**

**Subject: Hindi Paper: Hindi**

**Section : C**

|  |  |  |  |
| --- | --- | --- | --- |
| **Unit** | **Description of Chapter / Topics** | **Duration** | **Assignment / Test** |
| **Unit-1** | uO;rj x| & xkSjo lkfgfR;d ifjp;] x|ka'kksa dh lizlax O;k[;k | tuojh&Qjojh | izFke iznr dk;Z  Qjojh vfUre lIrkg] ekpZ izFke lIrkg d{kk ijh{kk |
| **Unit-2** | uO;rj x| & xkSjo fuca/kkRed iz'uksRrj] y?kw] vfry?kq] iz'uksRrj] | ekpZ | f}rh; iznrdk;Z ekpZ f}rh; lIrkg |
| **Unit-3** | gfj;k.koh Hkk"kk vkSj lkfgR; dk bfrgkl] gfj;k.koh Hkk"kk dk mnHko vkSj fodkl] izeq[k cksfy;k¡] ^^dh lkax ijaijk % mnHko vkSj fodkl Hkk"kk dk vk/kqfud lkfgR; % dfork] x| lkfgR;] miU;kl] dgkuh] ukV~;] y?kqrjkRed iz'uksRrj | vizSy izFke&r`rh; lIrkg | ekpZ vfUre lIrkg  d{kk & ijh{kk |
| **iqujko`fÙk** | Mijksr iqujko`fÙk | vizSy vfUre lIrkg |  |

**Lesson Plan**

**Government College, Hansi**

**Unit wise Lesson Plan for Odd Semester (2023-24)**

**Department: Hindi**

**Name of Teacher : Dr. Madhulika Class: B.A. I (2nd Sem.)**

**Subject: Hindi Paper: Hindi Comp.**

**Section : A, B, E**

|  |  |  |  |
| --- | --- | --- | --- |
| **Unit** | **Description of Chapter / Topics** | **Duration** | **Assignment / Test** |
| **Unit-1** | /kqzoLokfeuh ¼ukVd½ %  t;'kadj izlkn lkfgfR;d ifjp; ,oa i|ka'kksa dh lizlax O;k[;k | tuojh & Qjojh | izFke iznr dk;Z  Qjojh vkf[kjh lIrkg] ekpZ izFke lIrkg d{kk&ijh{kk |
| **Unit-2** | /kqzoLokfeuh ¼ukVd½ %  t;'kadj izlkn  vkykspukRed iz'u pfj=&fuekZ.k laca/kh iz'ku  y?kwrjkRed iz'uksrj | ekpZ izFke&r`rh; lIrkg | f}rh; iznr dk;Z ekpZ f}rh; lIrkg |
| **Unit-3** | fgUnh lkfgR; dk HkfDrdky % mn~Hko vkSj fodkl] ifjfLFkfr;ka HkfDrdky% eq[; izo`fr;ka] lardkO; dh izo`fr;ka] lwQh dkO; dh izo`fr;ka] jkedkO; dh izo`fr;ka] d`".k dkO; dh izofr;ka  HkfDrdky % LoxZ ;qx iz'uksÙkj | ekpZ vfUre lIrkg vizSy izFke lIrkg | d{kk ijh{kk] ekpZ] vfUre lIrkg |
| **Unit-** | O;kogkfjd fgUnh Hkk"kk dh ifjHkk"kk] Hkk"kk ds fofo/k :Ik] izo`fr;ka] eqgkojs ,oa yksdksfDr;ka iz'uksrj | vizSy f}rh; vkSj r`rh; lIrkg |  |
| **iqujko`fÙk** | mijksDr iqujko`fÙk | vizSy vfUre lIrkg |  |

**Lesson Plan**

**Government College, Hansi**

**Unit wise Lesson Plan for Odd Semester (2023-24)**

**Department: Hindi**

**Name of Teacher : Dr. Madhulika Class: B.A. II (4th Sem.)**

**Subject: Hindi Paper: Hindi Comp.**

**Section : C**

|  |  |  |  |
| --- | --- | --- | --- |
| **Unit** | **Description of Chapter / Topics** | **Duration** | **Assignment / Test** |
| **Unit-1** | dFkkd`e lSaik0] MkW0 jksfg.kh vxzoky % lkfgfR;d ifjp;] x|ka'kksa dh lizlax O;k[;k | tuojh&Qjojh | izFke iznr dk;Z Qjojh  f}rh; lIrkg Qjojh vfUre lIrkg d{kk ijh{kk |
| **Unit-2** | dFkkd`e % vkykspukRed iz'uksrj] y?kwjkRed] vfr y?kwjkRed iz'uksRrj | ekpZ | f}rh; iznrdk;Z ekpZ vfUre lIrkg |
| **Unit-3** | fgUnh lkfgR; dk vk/kqfud dky % x|&vk/kqfud dky dh ifjfLFkfr;k¡] HkkjrsUnq iwoZ fgUnh x|] miU;kl fgUnh dgkuh] ubZ dgkuh] ukVd] ,dkadh] iz'uksRrj | vizSy izFke&r`rh; lIrkg | vizSy izFke lIrkg d{kk&ijh{kk |
| iqujko`fÙk | ikfjHkkf"kd 'kCnkoyh % y?kwjkRed iz'uksRrj mijksDr iqujko`fr | vizSy vfUre lIrkg |  |

**Lesson Plan**

**Government College, Hansi**

**Unit wise Lesson Plan for Odd Semester 2023-24**

**Department: Hindi**

**Name of Teacher : Dr. Madhulika Class: B.A. III (6th Sem.)**

**Subject: Hindi Paper: Hindi Comp.**

**Section : A+D**

|  |  |  |  |
| --- | --- | --- | --- |
| **Unit** | **Description of Chapter / Topics** | **Duration** | **Assignment / Test** |
| **Unit-1** | uO;rj x| & xkSjo lkfgfR;d ifjp;] x|ka'kksa dh lizlax O;k[;k | tuojh&Qjojh | izFke iznr dk;Z  Qjojh vfUre lIrkg] ekpZ izFke lIrkg d{kk ijh{kk |
| **Unit-2** | uO;rj x| & xkSjo fuca/kkRed iz'uksRrj] y?kw] vfry?kq] iz'uksRrj] | ekpZ | f}rh; iznrdk;Z ekpZ f}rh; lIrkg |
| **Unit-3** | gfj;k.koh Hkk"kk vkSj lkfgR; dk bfrgkl] gfj;k.koh Hkk"kk dk mnHko vkSj fodkl] izeq[k cksfy;k¡] ^^dh lkax ijaijk % mnHko vkSj fodkl Hkk"kk dk vk/kqfud lkfgR; % dfork] x| lkfgR;] miU;kl] dgkuh] ukV~;] y?kqrjkRed iz'uksRrj | vizSy izFke&r`rh; lIrkg | ekpZ vfUre lIrkg  d{kk & ijh{kk |
| **iqujko`fÙk** | Mijksr iqujko`fÙk | vizSy vfUre lIrkg |  |

**Govt Collage Hansi ...Unit wise Lesson Plan even Semester 2023-24**

**Name of Teacher : Baljeet Rani**

**Class: B.A.3rd Subject : Hindi paper Compulsory**

|  |  |  |  |
| --- | --- | --- | --- |
| Unit | Description of Topic / Chapter | Duration. | Assignment / Test |
| Unit 1st. | निबंधः आशा का अंत, उत्साह, गिल्लू,, देवदारू, मेरे राम का मुकुट भीग रहा है, सदाचार का ताबीज, तिब्बत के पथ पर | जनवरी प्रथम सप्ताह से फरवरी प्रथमसप्ताह तक | प्रथम प्रदत कार्य, प्रथम कक्षा परीक्षा आखिरी सप्ताह |
| Unit 2nd. | हरियाणावी भाषा और साहित्य का इतिहास के सभी। प्रश्नन | फरवरी दूसरे सप्ताह से फरवरी आखिरी सप्ताह | मौखिक परीक्षा प्रदत्त कार्य |
| Unit 3rd | प्रयोजनमूलक हिंदी पत्रकारिता | मार्च प्रथम सप्ताह सेआखिरी सप्ताह | द्धितीय कक्षा परीक्षा प्रथम सप्ताह |
| Revision | पुनरावृत्ति | अप्रैल |  |

**Name of Teacher : Baljeet Rani**

**Class: B.A.3rd Subject : Hindi paper Elective**

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| Unit | Description of Topic / Chapter | Duration. | Assignment / Test |
| Unit 1st. | मानस का हंस ( अमृतलाल नागर)  मानस का हंस प्रतिपाद्य  चरित्र चित्रण  मानव संस्कार देशकाल और वातावरण  मानस के हंस की भाषा शैली | जनवरी प्रथम सप्ताह से फरवरी प्रथमसप्ताह तक | प्रथम प्रदत कार्य, प्रथम कक्षा परीक्षा आखिरी सप्ताह |
| Unit 2nd. | अशोक के फूल( हजारी प्रसाद द्विवेदी)  अस्ति की पुकार हिमालय( विद्यानिवास मिश्र)  घीसा( महादेवी वर्मा)  मेरे पिताजी( कन्हैया लाल मिश्र प्रभाकर)  मोहन राकेश की डायरी( मोहन राकेश)  भोले का जीव( हरिशंकर परसाई)  चीडो पर चांदनी( निर्मल वर्मा) | फरवरी दूसरे सप्ताह से फरवरी आखिरी सप्ताह | मौखिक परीक्षा प्रदत्त कार्य |
| Unit 3rd | काव्य का स्वरूप  काव्य के भेद  काव्य की परिभाषा  काव्य का प्रयोजन  काव्य के भेद महाकाव्य खंडकाव्य गीतिकाव्य  रस की परिभाषा और भेद  अलंकार की परिभाषा और भेद | मार्च प्रथम सप्ताह सेआखिरी सप्ताह | द्धितीय कक्षा परीक्षा प्रथम सप्ताह |
| Revision | पुनरावृत्ति | अप्रैल |  |

**Govt Collage Hansi ...Unit wise Lesson Plan even Semester 2023-24**

**Name of Teacher :Baljeet**

**Class: B.A.1st Subject : Hindi paper elective**

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| Unit | Description of Topic / Chapter | Duration. | Assignment / Test |
| Unit 1st. | प्राचीन एवं मध्य कालीन हिंदी काव्य, कबीरदास, मलिक मोहम्मद जायसी,सूरदास, तुलसी दास, मीराँबाई, बिहारी लाल,धनानंद | जनवरी प्रथम सप्ताह से फरवरी प्रथमसप्ताह तक | प्रथम प्रदत कार्य, प्रथम कक्षा परीक्षा आखिरी सप्ताह |
| Unit 2nd. | निर्मला(प्रेमचंद),प्रेमचंद का जीवन परिचय, कथासार, सप्रंसग व्याख्या, आलोचनात्मक प्रश्न, चरित्र चित्रण, लघूत्तरात्मक प्रश्न, अतिरिक्त प्रश्न | फरवरी दूसरे सप्ताह से फरवरी आखिरी सप्ताह | मौखिक परीक्षा प्रदत्त कार्य |
| Unit 3rd | हिंदी साहित्य का भक्तिकाल, उदभव एवं विकास, परिस्थितियाँ, प्रवृतियां, संत काव्य, सूफी काव्य, राम काव्य, कृष्ण काव्य, अष्टधाप,स्वण युग | मार्च प्रथम सप्ताह सेआखिरी सप्ताह | द्धितीय कक्षा परीक्षा प्रथम सप्ताह |
| Revision | पुनरावृत्ति | अप्रैल |  |

**Name of Teacher : Baljeet Rani**

**Class: B.sc.honours 1year(2nd sem.) Subject : Hindi paper - comp.**

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| Unit | Description of Topic / Chapter | Duration. | Assignment / Test |
| Unit 1st. | कबीर दास  सूरदास  मीराबाई  रसखान | जनवरी प्रथम सप्ताह से फरवरी प्रथमसप्ताह तक | प्रथम प्रदत कार्य, प्रथम कक्षा परीक्षा आखिरी सप्ताह |
| Unit 2nd. | संत काव्य की प्रवृत्तियां  सूफी काव्य की प्रवृत्तियां  राम काव्य की प्रवृत्तियां  कृष्ण काव्य की प्रवृत्तियां  भक्ति काल का स्वर्ण युग | फरवरी दूसरे सप्ताह से फरवरी आखिरी सप्ताह | मौखिक परीक्षा प्रदत्त कार्य |
| Unit 3rd | अलंकार  मुहावरे और लोकोक्तियां | मार्च प्रथम सप्ताह सेआखिरी सप्ताह | द्धितीय कक्षा परीक्षा प्रथम सप्ताह |
| Revision | पुनरावृत्ति | अप्रैल |  |

**Name of Teacher : Baljeet Rani**

**Class: B.A.1st Subject : Hindi paper Compulsory**

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| Unit | Description of Topic / Chapter | Duration. | Assignment / Test |
| Unit 1st. | ध्रुवस्वामिनी नाटक ,(जयशंकर प्रसाद),नाटक का कथानक, सप्रंसग व्याख्या, आलोचनात्मक प्रश्नन उत्तर, लधूत्तरात्मक प्रश्न,वस्तुनिष्ठ प्रश्न | जनवरी प्रथम सप्ताह से फरवरी प्रथमसप्ताह तक | प्रथम प्रदत कार्य, प्रथम कक्षा परीक्षा आखिरी सप्ताह |
| Unit 2nd. | हिंदी साहित्य का भक्तिकाल, परिस्थितियाँ, संत काव्य, सूफी काव्य, राम काव्य, कृष्ण काव्य, स्वणर्न युग | फरवरी दूसरे सप्ताह से फरवरी आखिरी सप्ताह | मौखिक परीक्षा प्रदत्त कार्य |
| Unit 3rd | व्यावहारिक हिंदी, भाषा की परिभाषा, विविध रूप, भाषा की प्रवृत्तियाँ, स्वर और व्यजंन, | मार्च प्रथम सप्ताह सेआखिरी सप्ताह | द्धितीय कक्षा परीक्षा प्रथम सप्ताह |
| Revision | पुनरावृत्ति | अप्रैल |  |