I.B. (PG) COLLEGE, PANIPAT

LESSON PLAN

SESSION 2023-24 (01.01.2024 to 30.04.2024)

Weekly Lesson Plan (Even Semester)

B.Sc. 6th Semester

Name of the Paper:- Microbial Biotechnology **Class: B.Sc. 3rd Year**

Name of the Teachers (Section Wise): Anjushree

WEEK	DATE	TOPICS
1	January (1-6)	
		Microbial Biotechnology: Historical landmarks, General concept.
		Microbial Biotechnology: Historical landmarks, General concept.
		Enrichment culture. Strain improvement- bacterial genetics
SUNDAY - 07.01.2024		
2	January (8-13)	Enrichment culture. Strain improvement- bacterial genetics
		Enrichment culture. Strain improvement- bacterial genetics
		mutant selection,Recombination.
SUNDAY - 14.01.2024		
3	January (15-16) January (18-20)	Recombinant DNA technology. Strain preservation and maintenance
		Nutrition and cultivation of microorganisms: Basic nutrition and metabolism
		Natural and Synthetic media
Natural and Synthetic media		
SUNDAY - 21.01.2024		
4	January (22-25) January (27)	Recombinant DNA technology. Strain preservation and maintenance
		Nutrition and cultivation of microorganisms: Basic nutrition and metabolism
		Natural and Synthetic media
HOLIDAY - 26.01.2024 - REPUBLIC DAY		
SUNDAY - 28.01.2024		
5	January (29-31) February (1-3)	Sterilization techniques
		Microbial growth kinetics
		Fermentation types
SUNDAY - 04.02.2024		

6	February (5-10)	Quantification of growth,Thermodynamics of growth, effect of different factors on growth.
		Physco-chemical standards used in bioreactors (agitation, aeration, pH, temp., dissolved oxygen etc.). Bioreactors types
SUNDAY - 11.02.2024		
7	February (12-13) February (15-17)	Process Development
		Downstream Processing Bioreactor applications
HOLIDAY 14.02.2024 - BASANT PANCHMI/SIR CHHOTU RAM JAYANTI		
SUNDAY - 18.02.2024		
8	February (19-24)	
		Microbial Products: a brief discussion about production of certain industrial products: Alcohol
		Fermentation types
		Microbial Products: a brief discussion about production of certain industrial products
SUNDAY - 25.02.2024		
9	February (26-29) March (1-2)	Microbial Products: a brief discussion about production of certain industrial products
		Microbial Products: Organic acids(citric acid),Antibiotics (Penicillin)
		Amino acids (Glutamic acid),Vitamins (Vitamin B_{12}),enzymes (Proteases)
SUNDAY - 03.03.2024		
10	March (4-7) March (9)	Microbial foods: Single Cell Proteins
		A brief account of Steroid Biotransformation Sewage waste treatment technique and plants
HOLIDAY - 08.03.2024 - MAHA SHIVRATRI		
SUNDAY - 10.03.2024		
11	March (11-16)	Assignment
		Biodegradation of Xenobiotic compounds Microbial Polysaccharides and Polyesters: Production of Xanthan gum
SUNDAY - 17.03.2024		

12	March (18-22)	Bioconversion: Bio gas production
		Bioconversion: Biomining and Bioleaching Microbial technology in agriculture: Bioinsecticides
HOLI VACATION - 23.03.2024 - 31.03.2024 (SHAHEEDI DIWAS - 23.03.2024)		
13	April (1-6)	Biocontrol agents for disease control,advantages over chemical methods
		Biofertilizers Use of GEM in Agriculture
SUNDAY - 07.04.2024		
14	April (8-10) April (12-13)	Use of GEM in Industry
		Use of GEM in Industry Use of GEM in Industry
HOLIDAY - 11.04.2024 - ID-UL-FITR		
SUNDAY - 14.04.2024		
15	April (15-16) April (18-20)	Applications of Microbial Biotechnology
		Applications of Microbial Biotechnology
		Applications of Microbial Biotechnology
HOLIDAY - 17.04.2024 - RAM NAVMI		
SUNDAY - 21.04.2024		
16	April (22-27)	Applications of Microbial Biotechnology
		Applications of Microbial Biotechnology
		Applications of Microbial Biotechnology
SUNDAY - 28.04.2024		
17	April (29-30)	Revision
University Examinations w.e.f. 01.05.2024		

I.B. (PG) COLLEGE, PANIPAT

LESSON PLAN

SESSION 2023-24 (01.01.2024 to 30.04.2024)

Weekly Lesson Plan (Even Semester)

B.Sc. 6th Semester

Name of the Paper:- Biochemistry and Plant Biotechnology Class: B.Sc. 3rd Year

Name of the Teachers (Section Wise) : Rajni

WEEK	DATE	TOPICS
1	January (1-6)	Basics of Enzymology: Discovery and Nomenclature,Characters of Enzyme Basics of Enzymology: Discovery and Nomenclature,Characters of Enzyme Concept of Holoenzyme, Apoenzyme
SUNDAY - 07.01.2024		
2	January (8-13)	Concept of Holoenzyme, Apoenzyme Coenzyme and Cofactors Coenzyme and Cofactors
SUNDAY - 14.01.2024		
3	January (15-16) January (18-20)	Regulation of Enzyme Activity Mechanism of Action
HOLIDAY - 17.01.2024-SHRI GURU GOBIND SINGH JI JAYANTI		
SUNDAY - 21.01.2024		
4	January (22-25) January (27)	Growth and Development: Definition, phases Plant Hormones Plant Hormones
HOLIDAY - 26.01.2024 - REPUBLIC DAY		
SUNDAY - 28.01.2024		
5	January (29-31) February (1-3)	Plant Hormones Plant Hormones Plant Hormones
SUNDAY - 04.02.2024		

6	**February (5-10)**	Photo-morphogenesis Photo-morphogenesis Phytochrome and their Discovery
SUNDAY - 11.02.2024		
7	**February (12-13) February (15-17)**	Physiological role and -Mechanism of Action Lipid Metabolism: Structure and Functions of Lipids, Fatty Acid Biosynthesis Lipid Metabolism: Structure and Functions of Lipids, Fatty Acid Biosynthesis
HOLIDAY 14.02.2024 - BASANT PANCHMI/SIR CHHOTU RAM JAYANTI		
SUNDAY - 18.02.2024		
8	**February (19-24)**	Lipid Metabolism: Structure and Functions of Lipids, Fatty Acid Biosynthesis Nitrogen Metabolism. Nitrogen Metabolism.
SUNDAY - 25.02.2024		
9	**February (26-29) March (1-2)**	Genetic engineering and Biotechnology-Aspects of Plant tissue Culture Genetic engineering and Biotechnology-Aspects of Plant tissue Culture Genetic engineering and Biotechnology-Aspects of Plant tissue Culture
SUNDAY - 03.03.2024		
10	**March (4-7) March (9)**	Genetic engineering and Biotechnology-Aspects of Plant tissue Culture Genetic engineering and Biotechnology-Aspects of Plant tissue Culture Genetic engineering and Biotechnology-Aspects of Plant tissue Culture
HOLIDAY - 08.03.2024 - MAHA SHIVRATRI		
SUNDAY - 10.03.2024		
11	**March (11-16)**	Biology of Agrobacterium Biology of Agrobacterium Biology of Agrobacterium

SUNDAY - 17.03.2024

12	**March (18-22)**	Vectors for Gene Delivery
		Vectors for Gene Delivery
		Vectors for Gene Delivery
HOLI VACATION - 23.03.2024 - 31.03.2024 (SHAHEEDI DIWAS - 23.03.2024)		
13	**April (1-6)**	Marker Genes
		Marker Genes
		Marker Genes
SUNDAY - 07.04.2024		
14	**April (8-10) April (12-13)**	Conditional Test
		Genomic and c-DNA Library
		Genomic and c-DNA Library
HOLIDAY - 11.04.2024 - ID-UL-FITR		
SUNDAY - 14.04.2024		
15	**April (15-16) April (18-20)**	Genomic and c-DNA Library
		Genomic and c-DNA Library
		Genomic and c-DNA Library
HOLIDAY - 17.04.2024 - RAM NAVMI		
SUNDAY - 21.04.2024		
16	**April (22-27)**	Assignment
		Revision
		Revision
SUNDAY - 28.04.2024		
17	**April (29-30)**	Revision
		test
University Examinations w.e.f. 01.05.2024		

I.B. (PG) COLLEGE, PANIPAT
LESSON PLAN
SESSION 2023-24 (01.01.2024 to 30.04.2024)

Weekly Lesson Plan (Even Semester)

UG (VI - Semester)

Name of the Paper:- **Organic Chemistry** **Class:** **B.Sc. 6th Sem.**

Name of the Teachers (Section Wise) :

WEEK	DATE	TOPICS
1	**January (4-6)**	Addition or chain- growth polymerization. Free radical vinyl polymerization,
SUNDAY - 07.01.2024		
2	**January (8-13)**	ionic vinyl polymerization, Ziegler- Natta polymerization and vinyl polymers.
SUNDAY - 14.01.2024		
3	**January (15-16) January (18-20)**	Condensation or step growth polymerization. Polyesters, polyamides, phenol formaldehyde resins.
HOLIDAY - 17.01.2024-SHRI GURU GOBIND SINGH JI JAYANTI		
SUNDAY - 21.01.2024		
4	**January (22-25) January (27)**	Natural and synthetic rubbers.
HOLIDAY - 26.01.2024 - REPUBLIC DAY		
SUNDAY - 28.01.2024		
5	**January (29-31) February (1-3)**	Classification, of amino acids. Acid- base behavior,
SUNDAY - 04.02.2024		

6	**February (5-10)**	isoelectric point and electrophoresis. Preparation of a- amino acids.
SUNDAY - 11.02.2024		
7	**February (12-13) February (15-17)**	Structure and nomenclature of peptides and proteins. Classification of proteins.
HOLIDAY 14.02.2024 - BASANT PANCHMI/SIR CHHOTU RAM JAYANTI		
SUNDAY - 18.02.2024		
8	**February (19-24)**	Peptide structure determination, end group analysis, selective hydrolysis of peptides. Classical peptide synthesis, solid– phase peptide synthesis.
SUNDAY - 25.02.2024		
9	**February (26-29) March (1-2)**	Structures of peptides and proteins: Primary & Secondary structure.
SUNDAY - 03.03.2024		
10	**March (4-7) March (9)**	Acidity of a- hydrogens, alkylation of diethyl malonate and ethyl acetoacetate.
HOLIDAY - 08.03.2024 - MAHA SHIVRATRI		
SUNDAY - 10.03.2024		
11	**March (11-16)**	Synthesis of ethyl acetoacetate: the Claisen condensation. Keto- enol tautomerism of ethyl acetoacetate.
SUNDAY - 17.03.2024		
12	**March (18-22)**	Introduction: Molecular orbital picture and aromatic characteristics of pyrrole, furan, thiophene and pyridine.
HOLI VACATION - 23.03.2024 - 31.03.2024 (SHAHEEDI DIWAS - 23.03.2024)		
13	**April (1-6)**	Methods of synthesis and chemical reactions with particular emphasis on the mechanism of electrophilic substitution.

SUNDAY - 07.04.2024		
14	**April (8-10) April (12-13)**	Mechanism of nucleophilic substitution reactions in pyridine derivatives. Comparison of basicity of pyridine, piperidine and pyrrole
HOLIDAY - 11.04.2024 - ID-UL-FITR		
SUNDAY - 14.04.2024		
15	**April (15-16) April (18-20)**	Introduction to condensed five and six- membered heterocycles. Prepration and reactions of indole,
HOLIDAY - 17.04.2024 - RAM NAVMI		
SUNDAY - 21.04.2024		
16	**April (22-27)**	quinoline and isoquinoline with special reference to Fisher indole synthesis, Skraup synthesis and Bischler-Napieralski synthesis.
SUNDAY - 28.04.2024		
17	**April (29-30)**	Mechanism of electrophilic substitution reactions of, quinoline and isoquinoline.
University Examinations w.e.f. 01.05.2024		

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LESSON PLAN
SESSION 2023-24 (01.01.2024 to 30.04.2024)

Weekly Lesson Plan (Even Semester)

UG -VI Semester

Name of the Paper:- **Physical Chemistry** **Class:** **B.Sc. 6th Sem.**

Name of the Teachers (Section Wise) : Dr. Vikram Kumar

WEEK	DATE	TOPICS
1	**January (4-6)**	Ideal and non-ideal solutions, methods of expressing concentrations of solutions,
SUNDAY - 07.01.2024		
2	**January (8-13)**	Dilute solutions, Raoult's law. Colligative properties: (i) relative lowering of vapour pressure
SUNDAY - 14.01.2024		
3	**January (15-16) January (18-20)**	(ii) Elevation in boiling point (iii) depression in freezing point (iv) osmotic pressure.
HOLIDAY - 17.01.2024-SHRI GURU GOBIND SINGH JI JAYANTI		
SUNDAY - 21.01.2024		
4	**January (22-25) January (27)**	Thermodynamic derivation of relation between amount of solute and elevation in boiling point and depression in freezing point..
HOLIDAY - 26.01.2024 - REPUBLIC DAY		
SUNDAY - 28.01.2024		
5	**January (29-31) February (1-3)**	Applications in calculating molar masses of normal, dissociated and associated solutes in solution.
SUNDAY - 04.02.2024		

6	**February (5-10)**	Statement and meaning of the terms – phase, component and degree of freedom,
SUNDAY - 11.02.2024		
7	**February (12-13) February (15-17)**	thermodynamic derivation of Gibbs phase rule, phase equilibria of one component system –Example – water system.
HOLIDAY 14.02.2024 - BASANT PANCHMI/SIR CHHOTU RAM JAYANTI		
SUNDAY - 18.02.2024		
8	**February (19-24)**	Phase equilibria of two component systems solid-liquid equilibria, simple eutectic Example Pb-Ag system, desilverisation of lead.
SUNDAY - 25.02.2024		
9	**February (26-29) March (1-2)**	Need for statistical thermodynamics, thermodynamic probability,
SUNDAY - 03.03.2024		
10	**March (4-7) March (9)**	Boltzmann distribution statistics, Born oppenheimer approximation,
HOLIDAY - 08.03.2024 - MAHA SHIVRATRI		
SUNDAY - 10.03.2024		
11	**March (11-16)**	partition function and its physical significance.
SUNDAY - 17.03.2024		
12	**March (18-22)**	Factorization of partition function.
HOLI VACATION - 23.03.2024 - 31.03.2024 (SHAHEEDI DIWAS - 23.03.2024)		

13	**April (1-6)**	Interaction of radiation with matter, difference between thermal and photochemical processes.
SUNDAY - 07.04.2024		
14	**April (8-10) April (12-13)**	Laws of photochemistry: Grotthus-Drapper law, Stark- Einstein law (law of photochemical equivalence),
HOLIDAY - 11.04.2024 - ID-UL-FITR		
SUNDAY - 14.04.2024		
15	**April (15-16) April (18-20)**	Jablonski diagram depiciting various processes occurring in the excited state,
HOLIDAY - 17.04.2024 - RAM NAVMI		
SUNDAY - 21.04.2024		
16	**April (22-27)**	qualitative description of fluorescence, phosphorescence, non-radiative processes (internal conversion, intersystem crossing), quantum yield, photosensitized reactions-energy transfer processes (simple examples).
SUNDAY - 28.04.2024		
17	**April (29-30)**	Revision and Tests
University Examinations w.e.f. 01.05.2024		

I.B. (PG) COLLEGE, PANIPAT

LESSON PLAN

SESSION 2023-24 (01.01.2024 to 30.04.2024)

Weekly Lesson Plan (Even Semester)

UG (IV / VI - Semester) : VI

Name of the Paper:- Computer Networks Class: BSC (CS)

Name of the Teachers (Section Wise) : Deepty Juneja

WEEK	DATE	TOPICS
1	January (1-6)	
		Itroduction of Computer Networks, Uses of Computer Networks;
		Types of Computer Networks and their Topologies;
SUNDAY - 07.01.2024		
2	January (8-13)	
		Network Hardware Components: Connectors, Transceivers,
		Repeaters, Hubs, Network Interface Cards and PC Cards
		Bridges, Switches, Routers, Gateways
SUNDAY - 14.01.2024		
3	January (15-16) January (18-20)	
		Network Software: Network Design issues and Protocols; Connection-Oriented and Connectionless Services
		OSI Reference Model;
HOLIDAY - 17.01.2024-SHRI GURU GOBIND SINGH JI JAYANTI		
SUNDAY - 21.01.2024		
4	January (22-25) January (27)	
		TCP/IP Model;
		Analog and Digital data and signals
HOLIDAY - 26.01.2024 - REPUBLIC DAY		
SUNDAY - 28.01.2024		
5	January (29-31) February (1-3)	
		Bandwidth and Data Rate, Capacity, Baud Rate
		Guided and Wireless Transmission Media; Communication Satellites;
		Switching and Multiplexing
SUNDAY - 04.02.2024		

6	**February (5-10)**	
		Modems and modulation techniques
		Data Link Layer Design issues; Error Detection and Correction methods
		Sliding Window Protocols: One-bit
SUNDAY - 11.02.2024		
7	**February (12-13) February (15-17)**	
		Go Back N and Selective Repeat
		Media Access Control: ALOHA, Slotted ALOHA
HOLIDAY 14.02.2024 - BASANT PANCHMI/SIR CHHOTU RAM JAYANTI		
SUNDAY - 18.02.2024		
8	**February (19-24)**	
		CSMA, Collision free protocols
		Introduction to LAN technologies: Ethernet
		Switched Ethernet, Fast Ethernet
SUNDAY - 25.02.2024		
9	**February (26-29) March (1-2)**	
		Gigabit Ethernet; Token Ring
		Introduction to Wireless LANs and Bluetooth;
		Assignment I
SUNDAY - 03.03.2024		
10	**March (4-7) March (9)**	
		Routing Algorithms: Flooding Shortest Path Routing, Distance Vector Routing
HOLIDAY - 08.03.2024 - MAHA SHIVRATRI		
SUNDAY - 10.03.2024		
11	**March (11-16)**	
		Link State Routing, Hierarchical Routing
		Congestion Control; Traffic shaping
		Group Discussion
SUNDAY - 17.03.2024		

12	March (18-22)	
		Conditional Test Choke packets;
		Application Layer: Introduction to DNS
HOLI VACATION - 23.03.2024 - 31.03.2024 (SHAHEEDI DIWAS - 23.03.2024)		
13	April (1-6)	
		Load shedding;
		E-Mail and WWW services;
		Assignment II
SUNDAY - 07.04.2024		
14	April (8-10) April (12-13)	
		Network Security Issues: Security attacks
		Encryption methods;
		Firewalls
HOLIDAY - 11.04.2024 - ID-UL-FITR		
SUNDAY - 14.04.2024		
15	April (15-16) April (18-20)	
		Digital Signatures;
		Revision
HOLIDAY - 17.04.2024 - RAM NAVMI		
SUNDAY - 21.04.2024		
16	April (22-27)	Revision
		Revision
		Revision
		Revision
		Revision
SUNDAY - 28.04.2024		
17	April (29-30)	Revision
		Revision
University Examinations w.e.f. 01.05.2024		

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LESSON PLAN

SESSION 2023-24 (01.01.2024 to 30.04.2024)

Weekly Lesson Plan (Even Semester)

UG (IV / VI - Semester) : VI

Name of the Paper:- Relational Data Base Management System Class: BSC (CS)

Name of the Teachers (Section Wise) : Deepty Juneja

WEEK	DATE	TOPICS
1	January (1-6)	
SUNDAY - 07.01.2024		
2	January (8-13)	Codd's Rules for Relational Model, Hierarchical Data Model– Introduction, Features, Components
		Database Management System (DBMS), Components of DBMS Environment
SUNDAY - 14.01.2024		
3	January (15-16) January (18-20)	Network Data Model– Introduction, Features, Components,
		Differences between Hierarchical Data Model and Network Data Model
HOLIDAY - 17.01.2024-SHRI GURU GOBIND SINGH JI JAYANTI		
SUNDAY - 21.01.2024		
4	January (22-25) January (27)	Comparison of Relational Data Model with Hierarchical Data Model and
		Relational Algebra:-Selection and Projection, Set Operation, Join and Division
HOLIDAY - 26.01.2024 - REPUBLIC DAY		
SUNDAY - 28.01.2024		
5	January (29-31) February (1-3)	Relational Calculus: Tuple Relational Calculus
		Relational Calculus: Tuple Relational Calculus
SUNDAY - 04.02.2024		

6	**February (5-10)**	Relational Calculus: Tuple Relational Calculus
		Domain Relational Calculus
SUNDAY - 11.02.2024		
7	**February (12-13) February (15-17)**	Normalization -- Purpose, Data Redundancy, Update Anomalies, Decomposition
		Partial/Fully Functional Dependencies, Transitive Functional Dependencies, Characteristics of Functional Dependencies,
HOLIDAY 14.02.2024 - BASANT PANCHMI/SIR CHHOTU RAM JAYANTI		
SUNDAY - 18.02.2024		
8	**February (19-24)**	Normal Forms (1NF, 2NF)
		Normal Forms (3NF , BCNF)
SUNDAY - 25.02.2024		
9	**February (26-29) March (1-2)**	SQL: Data Definition and data types,
		Create Table, Insert Data, Viewing Data
SUNDAY - 03.03.2024		
10	**March (4-7) March (9)**	Update, View, Delete, Join table
		Filtering Table Data, Sorting data, Creating Table from a Table, Destroy table
HOLIDAY - 08.03.2024 - MAHA SHIVRATRI		
SUNDAY - 10.03.2024		
11	**March (11-16)**	Concatenating data from Table,
		Specifying Constraints in SQL; Primary Key, Foreign Key,
SUNDAY - 17.03.2024		

12	**March (18-22)**	Unique Key, Check Constraint, Using Functions
		The Generic PL/SQL Block, PL/SQL Execution Environment
HOLI VACATION - 23.03.2024 - 31.03.2024 (SHAHEEDI DIWAS - 23.03.2024)		
13	**April (1-6)**	Assignment I
		PL/SQL-Introduction, Advantages of PL/SQL
SUNDAY - 07.04.2024		
14	**April (8-10) April (12-13)**	PL/SQL Character Set and Data Types
		Declaration and Assignment of Variables
HOLIDAY - 11.04.2024 - ID-UL-FITR		
SUNDAY - 14.04.2024		
15	**April (15-16) April (18-20)**	Class Test
		Control Structure in PL/SQL: Conditional Control,
HOLIDAY - 17.04.2024 - RAM NAVMI		
SUNDAY - 21.04.2024		
16	**April (22-27)**	Iterative Control
		Conditional Test
SUNDAY - 28.04.2024		
17	**April (29-30)**	Assignment II
		Sequential Control
University Examinations w.e.f. 01.05.2024		

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LESSON PLAN

SESSION 2023-24 (01.01.2024 to 30.04.2024)

Weekly Lesson Plan (Even Semester)

B.Sc. 6th Semester

Name of the Paper:- Economic Botany **Class: B.Sc. 3rd Year**

Name of the Teachers (Section Wise) : DR. NIDHAN SINGH

WEEK	DATE	TOPICS
1	January (1-6)	
		Origin of Cultivated Plants
		Origin of Cultivated Plants
		Centers of Origin of Cultivated Plants
SUNDAY - 07.01.2024		
2	January (8-13)	
		Centers of Origin of Cultivated Plants
		Centers of Origin of Cultivated Plants
		Food Plants-I: Wheat
SUNDAY - 14.01.2024		
3	January (15-16) January (18-20)	
		Food Plants-I: Wheat
		Food Plants-II: Rice
		Food Plants-II: Rice
HOLIDAY - 17.01.2024-SHRI GURU GOBIND SINGH JI JAYANTI		
SUNDAY - 21.01.2024		
4	January (22-25) January (27)	
		Food Plants-III: Maize
		Food Plants-III: Maize
HOLIDAY - 26.01.2024 - REPUBLIC DAY		
SUNDAY - 28.01.2024		
5	January (29-31) February (1-3)	
		Pulses-I: Gram
		Pulses-I: Gram
		Pulses-III: Peas
SUNDAY - 04.02.2024		

6	February (5-10)	Assignments Vegetables-I: Potato Vegetables-II: Tomato
SUNDAY - 11.02.2024		
7	February (12-13) February (15-17)	Vegetables-III: Onion Vegetables-III: Onion Fibre Plants-I: Cotton
HOLIDAY 14.02.2024 - BASANT PANCHMI/SIR CHHOTU RAM JAYANTI		
SUNDAY - 18.02.2024		
8	February (19-24)	Fibre Plants-I: Cotton Fibre Plants-II: Jute Fibre Plants-II: Jute
SUNDAY - 25.02.2024		
9	February (26-29) March (1-2)	Fibre Plants-III: Flax Fibre Plants-III: Flax Revision, Discussion and Doubts
SUNDAY - 03.03.2024		
10	March (4-7) March (9)	Oil Plants-I: Groundnut Oil Plants-I: Groundnut Oil Plants-II: Mustard
HOLIDAY - 08.03.2024 - MAHA SHIVRATRI		
SUNDAY - 10.03.2024		
11	March (11-16)	Oil Plants-II: Mustard Oil Plants-III: Coconut Spices-Morphology, Cultivation and Uses of Coriander
SUNDAY - 17.03.2024		

12	March (18-22)	
		Spices-Morphology, Cultivation and Uses of Ferula
		Spices-Morphology, Cultivation and Uses of Ferula
		General Account of Timber Plants
HOLI VACATION - 23.03.2024 - 31.03.2024 (SHAHEEDI DIWAS - 23.03.2024)		
13	April (1-6)	
		General Account of Timber Plants
		Spices-Morphology, Cultivation and Uses of Ginger
		Spices- Morphology, Cultivation and Uses of Cloves
SUNDAY - 07.04.2024		
14	April (8-10) April (12-13)	
		Spices- Morphology, Cultivation and Uses of Cloves
		Medicinal Plants- *Cinchona*
		Medicinal Plants- *Cinchona*
HOLIDAY - 11.04.2024 - ID-UL-FITR		
SUNDAY - 14.04.2024		
15	April (15-16) April (18-20)	
		Medicinal Plants- *Rauvolfia*
		Medicinal Plants- *Atropa*
		Medicinal Plants- *Opium*
HOLIDAY - 17.04.2024 - RAM NAVMI		
SUNDAY - 21.04.2024		
16	April (22-27)	
		Medicinal Plants- *Cannabis* , Neem
		Botanical Description, Processing of Tea
		Botanical Description, Processing of Coffee
SUNDAY - 28.04.2024		
17	April (29-30)	
		Botanical Description, Processing of Rubber (*Hevea,Sugarcane)*
		General Account of Energy Plantations, Biofuels
University Examinations w.e.f. 01.05.2024		

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LESSON PLAN

SESSION 2023-24 (01.01.2024 to 30.04.2024)

Weekly Lesson Plan (Even Semester)

B.Sc.: 6th Semester

Name of the Paper: Aquaculture and Pest management-II Class: B.Sc. 3rd Year

Name of the Teachers (Section Wise) : NEELAM THAREJA

WEEK	DATE	TOPICS
1	January (1-6)	
		Introduction to World Fisheries and Indian Fisheries
		Fresh Water Fishes of India: River System
		Fresh Water Fishes of India: River System
SUNDAY - 07.01.2024		
2	January (8-13)	
		Brackish Water fish Culture
		Captive and Culture Fisheries
		Captive and Culture Fisheries
SUNDAY - 14.01.2024		
3	January (15-16) January (18-20)	
		Cold Water Fisheries
		Fishing Crafts
		Fishing Crafts
HOLIDAY - 17.01.2024-SHRI GURU GOBIND SINGH JI JAYANTI		
SUNDAY - 21.01.2024		
4	January (22-25) January (27)	
		Fishing Gears
		Fishing Gears
HOLIDAY - 26.01.2024 - REPUBLIC DAY		
SUNDAY - 28.01.2024		
5	January (29-31) February (1-3)	
		Class Test
		Fin Fishes
		Crustaceans
SUNDAY - 04.02.2024		

6	February (5-10)	
		Molluscs and their culture
		Molluscs and their culture
		Class Test
SUNDAY - 11.02.2024		
7	February (12-13) February (15-17)	
		Sugercane Pests
		Sugercane Pests
		Sugercane Pests
HOLIDAY 14.02.2024 - BASANT PANCHMI/SIR CHHOTU RAM JAYANTI		
SUNDAY - 18.02.2024		
8	February (19-24)	
		Cotton Pests
		Cotton Pests
		Cotton Pests
SUNDAY - 25.02.2024		
9	February (26-29) March (1-2)	
		Class Test
		Class Seminar
		Class Seminar
SUNDAY - 03.03.2024		
10	March (4-7) March (9)	
		Class Seminar
		Class Seminar
		Class Seminar
HOLIDAY - 08.03.2024 - MAHA SHIVRATRI		
SUNDAY - 10.03.2024		
11	March (11-16)	
		Wheat Pests
		Wheat Pests
		Wheat Pests
SUNDAY - 17.03.2024		

12	March (18-22)	
		Paddy Pests
		Paddy Pests
		Paddy Pests
HOLI VACATION - 23.03.2024 - 31.03.2024 (SHAHEEDI DIWAS - 23.03.2024)		
13	April (1-6)	
		Class Test
		Revision
		Revision
SUNDAY - 07.04.2024		
14	April (8-10) April (12-13)	
		Vegetable Pests
		Vegetable Pests
		Vegetable Pests
HOLIDAY - 11.04.2024 - ID-UL-FITR		
SUNDAY - 14.04.2024		
15	April (15-16) April (18-20)	
		Class Test
		Revision
		Revision
HOLIDAY - 17.04.2024 - RAM NAVMI		
SUNDAY - 21.04.2024		
16	April (22-27)	
		Class Seminar
		Class Seminar
		Class Seminar
SUNDAY - 28.04.2024		
17	April (29-30)	
University Examinations w.e.f. 01.05.2024		

I.B. (PG) COLLEGE, PANIPAT

LESSON PLAN

SESSION 2023-24 (01.01.2024 to 30.04.2024)

Weekly Lesson Plan (Even Semester)

B.Sc.: 6th Semester

Name of the Paper: Aquaculture and Pest management-II Class: B.Sc. 3rd Year

Name of the Teachers (Section Wise) : PAWAN KUMAR

WEEK	DATE	TOPICS
1	January (1-6)	Aquaculture-introduction
		Aquaculture-introduction
		Aquaculture-introduction
SUNDAY - 07.01.2024		
2	January (8-13)	Seed production
		Seed production
		Seed production
SUNDAY - 14.01.2024		
3	January (15-16) January (18-20)	Seed production
		Seed production
HOLIDAY - 17.01.2024-SHRI GURU GOBIND SINGH JI JAYANTI		
SUNDAY - 21.01.2024		
4	January (22-25) January (27)	Class Test
		Hapas and ponds for fish culture
		Hapas and ponds for fish culture
HOLIDAY - 26.01.2024 - REPUBLIC DAY		
SUNDAY - 28.01.2024		
5	January (29-31) February (1-3)	Hapas and ponds for fish culture
		Hapas and ponds for fish culture
		Hapas and ponds for fish culture
SUNDAY - 04.02.2024		

6	**February (5-10)**	Assignment Class Test Revision
SUNDAY - 11.02.2024		
7	**February (12-13) February (15-17)**	Induced breeding
		Induced breeding
		Induced breeding
HOLIDAY 14.02.2024 - BASANT PANCHMI/SIR CHHOTU RAM JAYANTI		
SUNDAY - 18.02.2024		
8	**February (19-24)**	Induced breeding
		Induced breeding
		Induced breeding
SUNDAY - 25.02.2024		
9	**February (26-29) March (1-2)**	Nutrition
		Economic Importance
		Class Test
SUNDAY - 03.03.2024		
10	**March (4-7) March (9)**	Culture Technology
		Culture Technology
		Culture Technology
HOLIDAY - 08.03.2024 - MAHA SHIVRATRI		
SUNDAY - 10.03.2024		
11	**March (11-16)**	Stored Grain Pests
		Stored Grain Pests
		Stored Grain Pests
SUNDAY - 17.03.2024		

12	**March (18-22)**	Class Test
		Insect Control
		Insect Control
HOLI VACATION - 23.03.2024 - 31.03.2024 (SHAHEEDI DIWAS - 23.03.2024)		
13	**April (1-6)**	Chemical Control
		Chemical Control
		Chemical Control
SUNDAY - 07.04.2024		
14	**April (8-10) April (12-13)**	Integrated pest management
		Integrated pest management
		Rodent pest management
HOLIDAY - 11.04.2024 - ID-UL-FITR		
SUNDAY - 14.04.2024		
15	**April (15-16) April (18-20)**	Bird pest management
		Revision
		Revision
HOLIDAY - 17.04.2024 - RAM NAVMI		
SUNDAY - 21.04.2024		
16	**April (22-27)**	Class Test
		Class Test
		Revision
SUNDAY - 28.04.2024		
17	**April (29-30)**	Class Test
		Class Test
		Revision
University Examinations w.e.f. 01.05.2024		

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LESSON PLAN

SESSION 2023-24 (01.01.2024 to 30.04.2024)

Weekly Lesson Plan (Even Semester)

UG (IV / VI - Semester)

Name of the Paper:- Linear Algebra **Class: B.SC/B.A(III)**

Name of the Teachers (Section Wise) : Dr. ARPANA GARG

WEEK	DATE	TOPICS
1	January (1-6)	Vector Spaces
		Definition
		Examples
		More Examples on Vector Space
		Properties of Vector Space
		Examples
SUNDAY - 07.01.2024		
2	January (8-13)	Examples
		Examples
		Exercise
		Problems
		Subspace
		Theorems on Subspace
SUNDAY - 14.01.2024		
3	January (15-16) January (18-20)	Examples
		Exercise
		Problems
		Linear Combination
		Theorems
		Examples
HOLIDAY - 17.01.2024-SHRI GURU GOBIND SINGH JI JAYANTI		
SUNDAY - 21.01.2024		
4	January (22-25) January (27)	Exercise
		Sum of Spaces and Direct sum
		Examples
		Linearly Dependent and Independent Vectors
		Theorems
HOLIDAY - 26.01.2024 - REPUBLIC DAY		
SUNDAY - 28.01.2024		
5	January (29-31) February (1-3)	Examples
		Problems
		Basis and Dimension
		Finite Dimensional Vector Spaces
		Theorems
		Examples
SUNDAY - 04.02.2024		

6	**February (5-10)**	Examples
		Problems
		Dimension of a Vector Space
		Theorems
		Examples
		Problems
SUNDAY - 11.02.2024		
7	**February (12-13) February (15-17)**	Quotient Space
		Theorems
		Examples
		Homomorphism
		Test
HOLIDAY 14.02.2024 - BASANT PANCHMI/SIR CHHOTU RAM JAYANTI		
SUNDAY - 18.02.2024		
8	**February (19-24)**	Kernal of a Homomorphism
		Theorems based on Homomorphism
		Linear Transformation
		Theorems
		Examples
		Problems
SUNDAY - 25.02.2024		
9	**February (26-29) March (1-2)**	Null Space and Range of a Linear transformation
		Theorems
		Rank and Nullity of a linear Transformation
		Theorems
		Examples
		Algebra of a Linear Transformation
SUNDAY - 03.03.2024		
10	**March (4-7) March (9)**	Vector Space of Linear Transformations
		Theorems based on Homomorphism
		Algebra of a Linear Transformation
		Singular and Non Singular Linear Transformation
		Theorems, Examples
HOLIDAY - 08.03.2024 - MAHA SHIVRATRI		
SUNDAY - 10.03.2024		
11	**March (11-16)**	Minimal Polynomial
		Theorems, Examples
		Matrix Associatted with Linear Transformation
		Theorems
		Examples
		Problems
SUNDAY - 17.03.2024		

12	**March (18-22)**	Transition Matrix
		Examples
		Inner Product Space
		Problems
		Norm of a vector space
		Schwarz's Inequality
HOLI VACATION - 23.03.2024 - 31.03.2024 (SHAHEEDI DIWAS - 23.03.2024)		
13	**April (1-6)**	Orthogonal vectors
		Gram Schmidt Orthogonal;isation process
		Bessels Inequality
		Gram Schmidt Orthogonal;isation process
		Bessels Inequality
		Examples
SUNDAY - 07.04.2024		
14	**April (8-10) April (12-13)**	Unitary Transformation
		Theorems
		Eigen Values and Eigen Vectors
		Examples
		Test
HOLIDAY - 11.04.2024 - ID-UL-FITR		
SUNDAY - 14.04.2024		
15	**April (15-16) April (18-20)**	Diagonaliosable Linear Operator
		Examples
		Problems
		Diagonaliosable Linear Operator
		Examples
HOLIDAY - 17.04.2024 - RAM NAVMI		
SUNDAY - 21.04.2024		
16	**April (22-27)**	Dual Space
		Dual Space
		Theorems
		Examples
		Examples
		Test
SUNDAY - 28.04.2024		
17	**April (29-30)**	Examples
		Revision
		Examples
		Revision
University Examinations w.e.f. 01.05.2024		

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LESSON PLAN

SESSION 2023-24 (01.01.2024 to 30.04.2024)

Weekly Lesson Plan (Even Semester)

UG (IV / VI - Semester) vi semester

Name of the Paper:- REAL AND COMPLEX ANALYSIS Class: B.Sc/B.A III

Name of the Teachers (Section Wise) : Ms. Komal

WEEK	DATE	TOPICS
1	January (1-6)	Introduction to Jacobians. Definition of Jacoban.
		Chain rule for Jacobian and some results based on Jacobians
		Examples to find jacobian of given functions
		Examples to find jacobian of given functions
		Exercise 1.1
		Exercise 1.1
SUNDAY - 07.01.2024		
2	January (8-13)	Functional dependence (or non independance)
		examples related to functional dependecy
		Exercise 1.2
		Definition of Beta function and two properties of beta function
		third property of Beta function
		Examples and Exerise 2.1
SUNDAY - 14.01.2024		
3	January (15-16) January (18-20)	introduction to Gamma function . recuurence formula for gamma function
		Relation between Beta and Gamma function
		Examples to find Gamma function
		Duplication formula
		legendre 's formula
		Exercise 2.2
HOLIDAY - 17.01.2024-SHRI GURU GOBIND SINGH JI JAYANTI		
SUNDAY - 21.01.2024		
4	January (22-25) January (27)	Introduction of Fourier Series,some important Results on Definite
		Fourier series for even and odd functions
		Dirichlets conditions ,Properties of fourier coefficients and examples of Exercise 4.1
		Exercise 4.1
		doubt class
HOLIDAY - 26.01.2024 - REPUBLIC DAY		
SUNDAY - 28.01.2024		
5	January (29-31) February (1-3)	fourier expansion of functions having points of discontinuity
		Examples of exercise4.2
		introduction to double integral,evaluation of double integrals
		some examples to evaluate double integral
		substitution method for double integrals and example based on it
SUNDAY - 04.02.2024		

6	February (5-10)	Explanation to triple integral with the help of some examples
		substitution method for triple integrals and examples
		Application of double and triple integrals for finding area and volume of surfaces with examples
		Dirichlet's integral
		liouvill's extension of Dirichlet's integral
		change of order of integration with examples
SUNDAY - 11.02.2024		
7	February (12-13) February (15-17)	calculus of complex functions introduction
		stereographic projection of complex numbers with examples
		complex function or functions of a complex variable , limit of a complex function
		continuity of a complex function, uniform continuity examples
HOLIDAY 14.02.2024 - BASANT PANCHMI/SIR CHHOTU RAM JAYANTI		
SUNDAY - 18.02.2024		
8	February (19-24)	Differentiability of a complex function
		Rule of Differentiation
		Geometric interpretation of the derivative
		introduction to analytic function, Cauchy-Riemann equations
		some examples and doubt clearing session
		sufficient condition for f(z) to be analytic,C-R equations in polar form
SUNDAY - 25.02.2024		
9	February (26-29) March (1-2)	orthogonal system, introduction to Harmonic functions
		harmonic conjugate functions.examples
		examples
		construction of an analytic function- Milne's Thompson's method
		construction of an analytic function- Milne's Thompson's method
		EXAMPLES
SUNDAY - 03.03.2024		
10	March (4-7) March (9)	Applications of Analytic functions to field and flow problems
		introduction to Multi- valued function
		Branch,Branch cut, Branch point
		Elementary functions- Exponential function
		properties of exponential functions
		examples
HOLIDAY - 08.03.2024 - MAHA SHIVRATRI		
SUNDAY - 10.03.2024		
11	March (11-16)	Trigonometrical functions sinz and cosz
		Trigonometrical functions sinz and cosz
		examples
		properties of trigonometrical (Euler's theorem, De-Morvre's theorem for complex numbers)
		Introduction to Hyperbolic functions
		Properties of Hyperbolic functions
SUNDAY - 17.03.2024		

12	**March (18-22)**	the logarithmic function
		properties of the logarithmic function
		inverse trogonometric and hyperbolic functions
		Mapping by elementary functions and examples
		conformal mappping,linear transformation
HOLI VACATION - 23.03.2024 - 31.03.2024 (SHAHEEDI DIWAS - 23.03.2024)		
13	**April (1-6)**	Mobius transformation or Bilinear transformations
		critical points
		fixed points nature of mobius transformation
		nature of mobius transformation
		Problem Discussion
SUNDAY - 07.04.2024		
14	**April (8-10) April (12-13)**	Problem Discussion Test inverse point Exercise 6.2 Problem Discussion Revision
HOLIDAY - 11.04.2024 - ID-UL-FITR		
SUNDAY - 14.04.2024		
15	**April (15-16) April (18-20)**	introduction to critical mappings
		differential transformation w= exp(z)
		Logarithmic transfotmation w= log z
		trogonometric transformations
		examples
HOLIDAY - 17.04.2024 - RAM NAVMI		
SUNDAY - 21.04.2024		
16	**April (22-27)**	linear fractional transformations
		examples.
		exercise 7.1
		exercise 7.1
		Problem Discussion
SUNDAY - 28.04.2024		
17	**April (29-30)**	TEST
		Test
		Revision
		Revision
University Examinations w.e.f. 01.05.2024		

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LESSON PLAN

SESSION 2023-24 (01.01.2024 to 30.04.2024)

Weekly Lesson Plan (Even Semester)

UG (IV / VI - Semester)

Name of the Paper:- Dynamics **Class: B.Sc/B.A(III)**

Name of the Teachers (Section Wise) : Prof. Kanak Sharma

WEEK	DATE	TOPICS
1	January (1-6)	Discussion of some basic concepts and definitions
		Concept of displacement, velocity, acceleration, Conversion formulae
		Motion with constant acceleration
		Particle projected vertically downwards
		Particle projected vertically upwards under gravity.
SUNDAY - 07.01.2024		
2	January (8-13)	Motion along a plane curve, velocity along a plane curve
		Acceleration along a plane curve
		Components of velocity and acceleration
		Angular veocity and angular acceleration
		Relation between angular and linear velocity
		Questions related to angular and linear velocity
SUNDAY - 14.01.2024		
3	January (15-16) January (18-20)	Concept of radial and transverse velocity and acceleration and their derivations
		Concept of radial and transverse velocity and acceleration and their derivations
		Problems based on radial and transverse velocity and acceleration
		Concept of tangential and normal velocity and acceleration
		Derivation of tangential and normal velocity
		Derivation of tangential and normal acceleration
HOLIDAY - 17.01.2024-SHRI GURU GOBIND SINGH JI JAYANTI		
SUNDAY - 21.01.2024		
4	January (22-25) January (27)	Questions and discussion of problems
		Questions and discussion of problems
		Relative Displacement, Relative Velocity
		Determination of Relative Velocity
		Expression for the magnitude and direction of Relative Velocity
HOLIDAY - 26.01.2024 - REPUBLIC DAY		
SUNDAY - 28.01.2024		
5	January (29-31) February (1-3)	Questions based on relative velocity and discussion of problems
		Questions based on relative velocity and discussion of problems
		Questions based on relative velocity and discussion of problems
		Class Test
		Simple Harmonic Motion
		Derivation of expression for Simple Harmonic Motion
SUNDAY - 04.02.2024		

6	February (5-10)	Nature and Amplitude of Simple Harmonic Motion
		Periodic motion and articles based on it
		Frequency
		Questions based on Simple Harmonic Motion
		Questions based on Simple Harmonic Motion
		Problem Discussion
SUNDAY - 11.02.2024		
7	February (12-13) February (15-17)	Introduction to Newton's laws of Motion
		Mass, momentum and force
		Gravitational Force
		test
HOLIDAY 14.02.2024 - BASANT PANCHMI/SIR CHHOTU RAM JAYANTI		
SUNDAY - 18.02.2024		
8	February (19-24)	Newton's first ,second and third laws of Motion
		Questions based on Newton's laws of Motion
		Questions based on Newton's laws of Motion
		Pressure of a body resting on a horizontal plane moving vertically upwards or downwa
		Pressure of a body resting on a horizontal plane moving vertically upwards or downwa
SUNDAY - 25.02.2024		
9	February (26-29) March (1-2)	Pressure of a body resting on a horizontal plane moving vertically upwards or downwa
		Related questions
		Related questions
		Class Test
		examples
SUNDAY - 03.03.2024		
10	March (4-7) March (9)	Motion of a lift and problems based on it
		Motion of a lift and problems based on it
		Motion of two bodies connected by a string and related articles
		Motion on a smooth horizontal plane
		Motion on a rough horizontal plane
		Atwood's machine
HOLIDAY - 08.03.2024 - MAHA SHIVRATRI		
SUNDAY - 10.03.2024		
11	March (11-16)	Questions and discussion of problems
		Questions and discussion of problems
		Projectile Motion and articles based on it
		Derivations for latus rectum, vertex, directrix
		Axis of trajectory of a projectile, time of flight, horizontal range, greatest height, direct
SUNDAY - 17.03.2024		

12	March (18-22)	Questions based on Projectile Motion
		Questions based on Projectile Motion
		Concept of velocity at any point of trajectory and related problems.
		Concept of velocity at any point of trajectory and related problems.
		Derivations for finding directions of projection for a particle to hit a given point and pr
		Derivations for finding directions of projection for a particle to hit a given point and pr
HOLI VACATION - 23.03.2024 - 31.03.2024 (SHAHEEDI DIWAS - 23.03.2024)		
13	April (1-6)	Concept of range and time of flight on an inclined plane and their derivations
		Maximum range up the plane, questions based on it and discussion of problems
		Work, Power and Energy
		Examples
		examples
SUNDAY - 07.04.2024		
14	April (8-10) April (12-13)	Elastic Strings
		Introduction to Central Orbits and derivation of theorems based it
		Derivation of differential equation of central orbit in polar form
		Derivation of differential equation of central orbit in pedal form
		Areal velocity and its derivation
HOLIDAY - 11.04.2024 - ID-UL-FITR		
SUNDAY - 14.04.2024		
15	April (15-16) April (18-20)	Derivation of results for elliptic orbit
		Hyperbolic orbit and parabolic orbit
		Velocity in a circle and related theorems, Problems based on central orbits
		Apse and apsidal distances, theorems based on apse and apsidal distances
HOLIDAY - 17.04.2024 - RAM NAVMI		
SUNDAY - 21.04.2024		
16	April (22-27)	Velocity from infinity, questions based on apse and apsidal distances and Discussion of
		Kepler's Laws of Planetary Motion
		Motion of a particle on smooth and rough plane curves.
		Cycloidal motion, motion on a cycloid and questions based on it
		Motion on a rough curve under gravity, motion of a particle in three dimensions
SUNDAY - 28.04.2024		
17	April (29-30)	Velocity and acceleration of a particle along a curve and its derivation
		Acceleration of a particle in terms of spherical and cylindrical polar co-ordinates , relat
		Problem Discussion
		Problem discussion
University Examinations w.e.f. 01.05.2024		

I.B. (PG) COLLEGE, PANIPAT

LESSON PLAN

SESSION 2023-24 (01.01.2024 to 30.04.2024)

Weekly Lesson Plan (Even Semester)

UG (IV / VI - Semester) **VI - Semester**

Name of the Paper:- **Atomic and molecular spectroscopy :** **Class: B.Sc.**

Name of the Teachers (Section Wise) : Ms Sonia

WEEK	DATE	TOPICS
1	January (1-6)	Atomic and molecular spectroscopy : Historical Background Of Atomic Spectroscopy , Introduction Of Early Observations, Emission And Absorption Spectra, Atomic Spectra, Wave Number
SUNDAY - 07.01.2024		
2	January (8-13)	Spectra Of Hydrogen Atom, Bohr's Postulates , Explanation Of Spectral Series In Hydrogen Atom, Unquantized States Spectral Series In Absortion Spectra , Effect Of Nuclear Motion On Line Spectra (Correction Of Finite Nuclear Mass)And Continous SpectraVariation In Rydberg Constant Due To Finite Mass , Short Comings Of Bohr's Theory,
		Wilson Sommerfeld Quantization Rule ,
SUNDAY - 14.01.2024		
3	January (15-16) January (18-20)	De-Broglie Interpretation Of Bohr Quantization LawBohr's Corresponding Principle ,
		Sommerfeld's Extension Of Bohr's ModelSommerfeld Extension Of Bohr's Model, Sommerfeld Relativistic CorrectionModel , Short Coming Of Bohr's Sommerfeld Theory , Vector Atom Model , Space Quantization
		Electron Spin, Coupling Of Orbital And Spin Angular Momentum
HOLIDAY - 17.01.2024-SHRI GURU GOBIND SINGH JI JAYANTI		
SUNDAY - 21.01.2024		
4	January (22-25) January (27)	Model , Transition Probability And Selection Rules Problem Discussion, Vector Atom Model : Orbital Magnetic Dipole Moment (Bohr's Magneton) ,Behavior Of Magnetic Dipole In External Magnetic Field
		Larmor's Precession And Theorem, Penetrating And Non-Penetrating Orbits
HOLIDAY - 26.01.2024 - REPUBLIC DAY		
SUNDAY - 28.01.2024		
5	January (29-31) February (1-3)	Penetrating Orbits On Classical Model , Quantum Defect
		Spin Orbit Interaction ,Energy Of Single Valence Electron
SUNDAY - 04.02.2024		

6	February (5-10)	Spin Orbit Interaction For Penetrating Orbits
		Spin Orbit Interaction For Non Penetrating Orbits Quantum Mechanical Relativity Correction ,Hydrogen Fine Spectra
SUNDAY - 11.02.2024		
7	February (12-13) February (15-17)	Main Features Of Alkali Spectra And Their Theoretical Interpretation
		Term Series And Limits, Rydberg - Ritze Combination Principle
		Absorption Spectra Of Alkali Atoms
HOLIDAY 14.02.2024 - BASANT PANCHMI/SIR CHHOTU RAM JAYANTI		
SUNDAY - 18.02.2024		
8	February (19-24)	Observed Doublet Fine Structure In The Spectra Of Alkali Metals And Its Interpretation
		Intensity Rules For Doublets ,Comparison Of Alkali Spectra And Hydrogen Spectrum
		Vector atom model : essential features of spectra of alkaline – earth elements
SUNDAY - 25.02.2024		
9	February (26-29) March (1-2)	Vector model for 2 valence electrons atom ,application of spectra
		Coupling schemes: l-s or russell – saunders coupling scheme , Assignment J-J Coupling scheme, interaction energy in l-s coupling (s-p) configuration Interaction energy in l-s coupling (p-d) configuration
SUNDAY - 03.03.2024		
10	March (4-7) March (9)	Lande interval rule, pauli principle and periodic classification of elements Interaction energy in j-j coupling, Interaction energy in j-j coupling (s-p,p-d) configuration
		Spectral Terms Of Equivalent And Non Equivalent Electrons
HOLIDAY - 08.03.2024 - MAHA SHIVRATRI		
SUNDAY - 10.03.2024		
11	March (11-16)	Conditional Test
		Comparison of spectral terms of l-s and j-j coupling , hyperfine structure of spectral lines and its origin effect , nuclear spin , problem discussion
SUNDAY - 17.03.2024		

12	**March (18-22)**	Atom in external field : Zeeman effect (normal and anomalous)
		, experimental set-up for studying Zeeman effect,Explanation of normal Zeeman effect
		(classical and quantum mechanical)
HOLI VACATION - 23.03.2024 - 31.03.2024 (SHAHEEDI DIWAS - 23.03.2024)		
13	**April (1-6)**	Explanation of anomalous Zeeman effect (lande g-factor),Zeeman pattern of D1and D2 lines of sodium atom
		Paschen-back effect of a single valance electron system
SUNDAY - 07.04.2024		
14	**April (8-10) April (12-13)**	Weak field stark effect of hydrogen atom , problem discussion
		Molecular physics: general consideration, electronic states of diatomic
HOLIDAY - 11.04.2024 - ID-UL-FITR		
SUNDAY - 14.04.2024		
15	**April (15-16) April (18-20)**	
HOLIDAY - 17.04.2024 - RAM NAVMI		
SUNDAY - 21.04.2024		
16	**April (22-27)**	Raman effect , electronic spectra Numerical problems
		group discussion
SUNDAY - 28.04.2024		
17	**April (29-30)**	Revision and group discussion
University Examinations w.e.f. 01.05.2024		

I.B. (PG) COLLEGE, PANIPAT

LESSON PLAN

SESSION 2023-24 (01.01.2024 to 30.04.2024)

Weekly Lesson Plan (Even Semester)

UG (IV / VI - Semester) - VI Semester

Name of the Paper:- Solid State and Nano Physics **Class: Bsc. IIIrd**

Name of the Teachers (Section Wise) : Ms. Manisha

WEEK	DATE	TOPICS
1	January (1-6)	
SUNDAY - 07.01.2024		
2	January (8-13)	
		INTRODUCTION,Crystalline and glassy forms, liquid crystals, crystal structure
		Periodicity, lattice and basis
		Crystal translational vectors and axes
SUNDAY - 14.01.2024		
3	January (15-16) January (18-20)	
		Unit cell and Primitive Cell, Winger Seitz primitive Cell
		Symmetry operations for a two dimensional crystal
		Bravais lattices in two and three dimensions
HOLIDAY - 17.01.2024-SHRI GURU GOBIND SINGH JI JAYANTI		
SUNDAY - 21.01.2024		
4	January (22-25) January (27)	
		Crystal planes and Miller indices
		Interplaner spacing, Crystal structures of Zinc Sulphide,
HOLIDAY - 26.01.2024 - REPUBLIC DAY		
SUNDAY - 28.01.2024		
5	January (29-31) February (1-3)	
		Sodium Chloride and Diamond
		UNIT -2, INTRODUCTION and X-ray diffraction
		Bragg's Law and experimental X-ray diffraction methods
SUNDAY - 04.02.2024		

6	February (5-10)	
		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.
SUNDAY - 11.02.2024		
7	February (12-13) February (15-17)	
		UNIT-3,Historical introduction, Survey of superconductivity
		Super conducting systems, High Tc Super conductors
		Isotopic Effect
HOLIDAY 14.02.2024 - BASANT PANCHMI/SIR CHHOTU RAM JAYANTI		
SUNDAY - 18.02.2024		
8	February (19-24)	
		Critical Magnetic Field
		Meissner Effect
		London Theory and Pippards' equation
SUNDAY - 25.02.2024		
9	February (26-29) March (1-2)	
		Classification of Superconductors (type I and Type II),
		BCS Theory of Superconductivity
		Flux quantization, Josephson Effect (AC and DC)
SUNDAY - 03.03.2024		
10	March (4-7) March (9)	
		Practical Applications of superconductivity
		Practical Applications of superconductivity and their limitations
HOLIDAY - 08.03.2024 - MAHA SHIVRATRI		
SUNDAY - 10.03.2024		
11	March (11-16)	
		Power application of superconductors
		Conditional test
		UNIT-4, Introduction of Nano physics
SUNDAY - 17.03.2024		

12	March (18-22)	
		Definition, Length scale
		Importance of Nano-scale and technology
HOLI VACATION - 23.03.2024 - 31.03.2024 (SHAHEEDI DIWAS - 23.03.2024)		
13	April (1-6)	
		History of Nantechnology
		Benefits and challenges in molecular manufacturing
		Molecular assembler concept
SUNDAY - 07.04.2024		
14	April (8-10) April (12-13)	
		Understanding advanced capabilities
		Vision and objective of Nano-technology
		Nanotechnology in different field
HOLIDAY - 11.04.2024 - ID-UL-FITR		
SUNDAY - 14.04.2024		
15	April (15-16) April (18-20)	
		Nanotechnology in different field, Automobile, Electronics
		Nano-biotechnology, Materials, Medicine.
		Numerical Problems discussion
HOLIDAY - 17.04.2024 - RAM NAVMI		
SUNDAY - 21.04.2024		
16	April (22-27)	
		Numerical Problems discussion
		Revision
		Revision
SUNDAY - 28.04.2024		
17	April (29-30)	
		Revision
University Examinations w.e.f. 01.05.2024		