Chemistry PG (2025-2026)

Adarsh Mahila Mahavidyalaya, Bhiwani

Session 2025-26 (Even Semester)

Lesson Plan from 1st Jan. to 5th May. (UG & PG Classes)

Class with Sem M.Sc I, 2nd sem Subject Inorganic... Lecturer Name ..Dr. Reecha

Course objectives (1) To know about chemistry magnetic properties of transition metal complexes.
(2) To know about electronic spectra of Transition metal complex
(3) To know about metal π - complexes
(4) to know about Boranes.

Week	Topics	Methodology
01 Jan - 3 Jan	Introduction to unit-1 magnetic properties of transition metal complexes, Elementry theory of magnetochemistry	chalk and Board
05 Jan to 10 Jan	Determination of magnetic susceptibility Curie and Curie-Weiss law for temperature dependence, calculation of magnetic moments of metal Cr3+, Mn2+, etc	"
12 Jan to 17 Jan	Applications of magnetochemistry in structure determination, magnetic Exchange coupling and spin state cross over in c.c.	"
19 Jan to 24 Jan	Revision and Doubt Session class.	"
27 Jan to 31 Jan	Electronic spectra of Transition metal complexes; spectroscopic ground states, spin-orbit coupling in free metal ions for 3d- series of transition metals	"
02 Feb to 07 Feb	Orgel diagrams (d^1 to d^{10}) and Tanabe-Sugano diagrams for transition metal complexes, charge transfer spectra	"
09 Feb to 14 Feb	Elementry concept of Dq, B and β Parameter, Effect of Jahn-Teller distortion on electronic spectra -	"
16 Feb to 21 Feb	Electronic spectra of molecular addition compound of iodine.	"

Week	Topics	Methodology
23 Feb to 28 Feb	Rivision, Test and Doubt classes of Unit-2 and Test	[illegible]
01 Mar to 08 Mar	**Holi Break**	"
09 Mar to 14 Mar	18 e rule, counting method and ligand contribution, hapto ligand with hapticity from two to eight, metal carbonyls for bonding and structural elucidation.	"
16 Mar to 21 Mar	Low nuclearity carbonyls clusters (LNCC), High nuclearity carbonyl clusters, cluster having interstitial atoms,	"
30 Mar to 04 April	**House Test**	"
06 April to 11 April	Clusters having interstitial atoms, Electron counting scheme for high nuclearity clusters, Polyhedral skeletal electron pair/[illegible] rule	"
13 April to 18 April	important chemical reactions of metal carbonyls, Preparation, bonding structure and important reactions of metal carbonyls, Preparation	"
20 April to 25 April	bonding structure and important reactions of transition metal nitrosyl dinitrogen and dioxygen complex, tertiary phosphine as ligand.	"
27 April to 02 May	Boranes: Introduction, Nomenclature, Synthesis and properties of some important members B_2H_6, B_4H_{10}, B_5H_9, B_5H_{11}, and $B_{10}H_{14}$, bonding in borane.	"
04 May to 05 May	Carboranes:- Introduction, general methods of preparation and important properties, isolobal analogy, metal carbonyl and halide cluster [illegible] bonding	"

Reference Books:- Ajay Kumar, Meerut Publication

Lecturer

HOD

Adarsh Mahila Mahavidyalaya, Bhiwani

Session 2025-26 (Even Semester)

Lesson Plan from 1st Jan. to 5th May. (UG & PG Classes)

Class with Sem M.Sc.-Ist Practical Subject ...Chemistry.. Lecturer Name ..Ms. Minakshi

Course objectives ....
Understanding the laboratory etiquettes to perform experiment.

Week	Topics	Methodology
01 Jan - 3 Jan	Green methods of preparation of the following a) Bis (acetylacetonato) zinc(II)	experimental
05 Jan to 10 Jan	Preparation of Bis (acetylacetonato) chromium(II)	"
12 Jan to 17 Jan	Repeat both experiment and prepare Internal VIVA-Voce	"
19 Jan to 24 Jan	Inorganic analysis of separation and determination of two metal ions via volumetric.	"
27 Jan to 31 Jan	Volumetric and Gravimetric analysis method Cu-Ni, Cu-Zn	"
02 Feb to 07 Feb	Volumetric and Gravimetric analysis method of Cu-Ag Cu-Ba, Fe-Ni.	"
09 Feb to 14 Feb	Determination of Cerimetry: Ferrous oxalate, Nitrite etc.	"
16 Feb to 21 Feb	Repeat this experiment	"

Week	Topics	Methodology
23 Feb to 28 Feb	VIVA – VOCE Preparation	Experimental
01 Mar to 08 Mar	**Holi Break**	//
09 Mar to 14 Mar	Repeat Ist one experiment and Prepare VIVA	//
16 Mar to 21 Mar	Preparation of Bis (acetylacetonato) zinc II	/
30 Mar to 04 April	**House Test**	//
06 April to 11 April	Preparation of Bis (acetylacetonato) Chromium II	//
13 April to 18 April	Separation of Metal ions Cu – Ni	//
20 April to 25 April	Separation of Metal ions Cu – Zn	//
27 April to 02 May	Separation of metal ion Ni – Zn	//
04 May to 05 May	Revision	//

Reference Books:- Vogel Textbook

Miraksha
Lecturer

Nitika
HOD

Adarsh Mahila Mahavidyalaya, Bhiwani

Session 2025-26 (Even Semester)

Lesson Plan from 1st Jan. to 5th May. (UG & PG Classes)

Class with Sem M.Sc. I (2nd Sem) Subject Physical Chemistry Lecturer Name Dr. Ritika Chaudhary

Course objectives :- 1. Significance of statistic mechanics and its various tool to understand real world problem.
2. Discussion of various theories for understanding the rate of chemical rxn.
3. Realization of statistics mechanics through the result of quantum mechanics & understanding laws of photochemistry and kinetics of photophysical process.

Week	Topics	Methodology
01 Jan - 3 Jan	Statistical mechanics :- Introduction, microstates and macrostates, concept of distribution, thermodynamic probability & most probable distribution for maxwell Boltzmann statistics.	Lecture Method
05 Jan to 10 Jan	Bose-Einstein & Fermi Dirac statistics, Identification of the constant α and β, partition function and its significance, Application of Bose-Einstein statistics for a photon gas.	"
12 Jan to 17 Jan	Application of Fermi-Dirac statistics, Partition function, multiplication theorem of partition function, Thermodynamic properties in terms of partition function.	"
19 Jan to 24 Jan	Statistical thermodynamics :- Expression for translational, Rotational, vibrational, Nuclear and electronic partition function, Thermodynamic properties of monoatomic ideal gas.	"
27 Jan to 31 Jan	Sackur Tetrode equation, Thermodynamic properties of diatomic ideal gas (evaluation of energy, enthopy, heat capacity etc.) Zero point energy for	"
02 Feb to 07 Feb	vibrational motion, Thermodynamic properties of poly atomic ideal gas. (evaluation of energy, entropy, heat capacity etc) Zero point energy for vibrational motion, Thermodynamic	"
09 Feb to 14 Feb	properties of poly atomic ideal gas linear molecule & non-linear molecule Rotational contribution, and vibrational contribution towards energy and entropy)	"
16 Feb to 21 Feb	Chemical dynamics :- Effect of temperature on reaction rates, Arrhenius equation, collision theory of reaction rates, thermody-	"

Week	Topics	Methodology
23 Feb to 28 Feb	namic formulation of activated complex theory, correlation between various theories of reaction rates. Enzymatic reaction - Michaelis menton treatment, evaluation of michaelis constant for enzymes	"
01 Mar to 08 Mar	**Holi Break** — Assignment —	—
09 Mar to 14 Mar	substrate binding by lineweaver burk plot, concept of inhibition chain reactions. (formation of HBr & HCl) decomposition of acetaldehyde & ethane) Apparent activation	"
16 Mar to 21 Mar	energy, chain length, Rice-Herzfeld mechanism (acetaldehyde)	— "
30 Mar to 04 April	**House Test**	+
06 April to 11 April	Photochemistry:- Laws of photochemistry (Grothus-Draper law, stark-Einstein law of photochemical equivalence and Lambert-beer's law, quantum yield, quantum efficiency and	"
13 April to 18 April	reasons for high and low quantum yield, Singlet and triplet state Jablonskii diagram, photophysical processes (radiative or non-radiative)	"
20 April to 25 April	fluorescence, phosphorescence and chemiluminescence, The photostationary state, Stern Volmer equation, Photochemical	"
27 April to 02 May	Reactions, photoreduction, photooxidation, photodimerization photochemical substitution and photosensitized reaction	"
04 May to 05 May	— Revision —	"

Reference Books:- Atkins & Rastogi

Lecturer

HOD

Adarsh Mahila Mahavidyalaya, Bhiwani

Session 2025-26 (Even Semester)

Lesson Plan from 1st Jan. to 5th May. (UG & PG Classes)

Class with Sem M.Sc. I (IInd Sem.) Subject Physical Chemistry (PH.) Lecturer Name Dr. Ritika Chaudhary

Course objectives Understanding the laboratory etiquettes to perform experiment, analyse the data and compilation of experimental information in the practical Notebook.

Week	Topics	Methodology
01 Jan - 3 Jan	Determine the strength of strong acid by titration with standardized strong base.	Practical
05 Jan to 10 Jan	Determine the strength of weak acid by titration with standardized strong base.	"
12 Jan to 17 Jan	Determination of rate Constant of hydrolysis of methyl acetate at room temperature.	"
[illegible] to 24 Jan	Determination of rate constant of hydrolysis of ethyl acetate at room temperature.	"
27 Jan to 31 Jan	To Study the saponification reaction of ethyl acetate sodium hydroxide solution kinetically	"
02 Feb to 07 Feb	Determine the heat of neutralization of strong acid and strong base.	"
09 Feb to 14 Feb	Determine the heat of neutralization of weak acid and strong base.	"
16 Feb to 21 Feb	— Repeat — Determine the strength of strong acid by titration with standardized strong base.	"

Week	Topics	Methodology
23 Feb to 28 Feb	— Repeat — Determine the strength of weak acid by titration with standardized strong base.	Practical
01 Mar to 08 Mar	**Holi Break**	
09 Mar to 14 Mar	Determination of rate constant of hydrolysis of ethyl acetate at room temperature.	〃
16 Mar to 21 Mar	Determination of molar masses of volatile substances by victor-Meyer's method.	〃
30 Mar to 04 April	**House Test**	
06 April to 11 April	— Repeat — Determination of molar masses of volatile substances by victor-Meyer's method.	〃
13 April to 18 April	— Viva-Voce —	〃
20 April to 25 April	— Viva — Voce —	〃
27 April to 02 May	— Revision —	〃
04 May to 05 May	— Revision —	〃

Reference Books:
1. James, A.M. & Prichard
2. Vogel
3. Lavitt, B.P.

Chitika
Lecturer

Chitika
HOD

Adarsh Mahila Mahavidyalaya, Bhiwani

Session 2025-26 (Even Semester)

Lesson Plan from 1st Jan. to 5th May. (UG & PG Classes)

Class with Sem .Msc II (II Sem) Subject Organic Chemistry- II . Lecturer Name .Ms. Tanya

Course objectives .....
i) In depth understanding of aromatic electrophilic and nucleophilic substitution reaction
ii) Fundamental and advanced knowledge of elimination reaction
iii) In depth understanding of electrophilic addition reaction of alkenes,
iv) Thorough understanding of various rearrangement reaction

Week	Topics	Methodology
01 Jan - 3 Jan	Aromatic Electrophilic substitution The arenium ion mechanism, Orientation and reactivity	Lecture Method
05 Jan to 10 Jan	energy profile diagrams. The ortho/ para ratio, ipso attack, orientation in other ring systems. Diazonium coupling, Gattermann Koch reaction,	"
12 Jan to 17 Jan	Vilsmeir Haak reaction, Riemer Tiemann reaction, Fries rearrangement Aromatic Nucleophilic Substitution The $ArSN1$, $ArSN2$, Benzyne and $SRN1$ mechanism, Reactivity	"
19 Jan to 24 Jan	effect of substrate structure, leaving group and attacking nucleophile. Von Richter and smiles rearrangement. Elimination Reaction- The $E1$, E_2 and $E1cb$ mechanism Orientation effects	"
27 Jan to 31 Jan	in elimination reactions, reactivity - effect of substrate structures, attacking base, the leaving group and the medium Saytzeff and Hoffmann	"
02 Feb to 07 Feb	rules, Stereochemistry of E_2 elimination reactions and eclipsing effects in E_2 eliminations. Addition to carbon- Carbon multiple	"
09 Feb to 14 Feb	bond mechanistic and stereochemical aspects of addition reactions involving electrophiles, nucleophiles and free radical, regio- and chemoselectivity,	"
16 Feb to 21 Feb	orientation and reactivity Hydrogenation of double and triple bonds, hydrogenation of aromatic rings. Hydroboration Michael reaction Sharpless	"

Week	Topics	Methodology
23 Feb to 28 Feb	asymmetric epoxidation Test of unit - I & II	//
01 Mar to 08 Mar	**Holi Break** Assignments	—
09 Mar to 14 Mar	Addition to Carbon - Hetero multiple bond Reactivity of carbonyl compound towards addition. Addition of Grignard Reagents, organozinc	//
16 Mar to 21 Mar	and organolithium reagents to Carbonyl and α, β - unsaturated Carbonyl compounds with reaction. mechanism of metal hyanide reduction	//
30 Mar to 04 April	**House Test** (LiAlH4 and NaBH4) of saturated and unsaturated carbonyl compound acids, esters and nitriles.	//
06 April to 11 April	mechanism of condensation reactions involving enolates — Aldol Knoevenagel, Claisen, mannich Robinson, Reformatsky, Benzoin, Perkin	//
13 April to 18 April	and Stobbe reactions, Hydrolysis of esters and amides. Rearrangements :- Classification and general mechanistic treatment of	//
20 April to 25 April	Nucleophilic, free radical and electrophilic rearrangement, Wagner Meerwein, Pinacol - Pinacolone, Benzil Benzilic acid, Favorskii, steven	//
27 April to 02 May	Wittig, Neber, Wolf Beckmann, Hoffmann, Curtius, Lossen, Schmidt, Bayer - villger.	//
04 May to 05 May	— Revision —	//

Reference Books:- Pearson, Morrison and Boyd
Jerry March

Lecturer Jaya

HOD

Adarsh Mahila Mahavidyalaya, Bhiwani

Session 2025-26 (Even Semester)

Lesson Plan from 1st Jan. to 5th May. (UG & PG Classes)

Class with Sem Msc. I (IInd Sem) Subject Organic chemistry Practical (26PN-CHE-207) Lecturer Name Ms. Tanya

Course objectives .....

i) Seperation, purification and identification of compounds of binary mixtures.
ii) Plan & execute two step organic synthesis
iii) Increase in their students understanding and applying the organic chemistry principles in synthesis

Week	Topics	Methodology
01 Jan - 3 Jan	Seperation and identification of compound of binary mixture only solids by chemical tests, derivatization.	Practical
05 Jan to 10 Jan		"
12 Jan to 17 Jan	— Repeat —	"
19 Jan to 24 Jan	— Repeat —	"
27 Jan to 31 Jan	Seperation and identification of compound of binary mixture only solids	"
02 Feb to 07 Feb	by chemical tests, derivatization.	"
09 Feb to 14 Feb	— Repeat —	"
16 Feb to 21 Feb	Preparation of Benzilic acid from benzoin	"

Week	Topics	Methodology
23 Feb to 28 Feb	— Repeat —	"
01 Mar to 08 Mar	**Holi Break**	—
09 Mar to 14 Mar	Preparation of p-nitroacetanilide from aniline	"
16 Mar to 21 Mar	Preparation of sulphanilic acid from aniline	"
30 Mar to 04 April	**House Test**	—
06 April to 11 April	Preparation of m-dinitrobenzene from nitrobenzene	"
13 April to 18 April	— Repeat —	"
20 April to 25 April	Preparation of p-nitroaniline from aniline	"
27 April to 02 May	— Repeat —	"
04 May to 05 May	— Repeat —	"

Reference Books:- Vogel & Fieser

Lecturer

HOD

Adarsh Mahila Mahavidyalaya, Bhiwani

Session 2025-26 (Even Semester)

Lesson Plan from 1st Jan. to 5th May. (UG & PG Classes)

(II nd Sem)

Class with Sem M.Sc. I Subject Spectroscopy (25PNCHE204) Lecturer Name Ms. Tanya

Course objectives .....

i) Advance Knowledge of electronic and infrared spectroscopy
ii) Understanding of NMR and its application to organic compounds in identification
iii) Understanding of mass spectrometry to determine the molecular mass of the organic compounds iv) Ability to understand about C-13 NMR spectroscopy.

Week	Topics	Methodology
01 Jan - 3 Jan	Electronic Spectroscopy - Introduction and understanding of UV visible phenomenon, theory of electronic spectroscopy, instrumentation and sampling, solvent effect, conjugation effects, the chromophore and auxochrome	Lecture method
05 Jan to 10 Jan	Concepts, rules for prediction of wavelength, application of electronic spectroscopy dienes, polyenes, carbonyl compounds, benzene and its substituted polyenes, carbonyl compounds, benzene and its	"
12 Jan to 17 Jan	substituted derivatives, aromatic hydrocarbon other than benzene, heterocyclic systems and stereochemical factors in electronic spectroscopy. Infrared spectroscopy:- Principle, units of frequency, wavelength and	"
19 Jan to 24 Jan	wavelength, number, molecular vibrations factors influencing vibrational frequencies Instrumentation - dispersive and interferometric instruments, sampling	"
27 Jan to 31 Jan	techniques, applications of IR identify by fingerprinting and functional group of different organic molecules, quantitative infrared analysis, attenuated total	"
02 Feb to 07 Feb	reflectance and multiple internal reflectance. Nuclear magnetic Resonance spectroscopy:- Introduction, nuclear spin states, nuclear magnetic moments, resonance	"
09 Feb to 14 Feb	population densities, chemical shift and shielding mechanism, instrumentation, chemical equivalence integrals and integration, chemical environment & chemical shift,	"
16 Feb to 21 Feb	local diamagnetic shielding, magnetic anisotropy, spin-spin splitting, Pascal's triangle, comparision of spectra at low and high field	"

Week	Topics	Methodology
23 Feb to 28 Feb	Strength, spin-spin coupling - symbols, mechanism, types of scale of magnetic equivalence, concept of non-equivalence within a group, Applications of NMR in structure	"
01 Mar to 08 Mar	Holi Break — Assignments —	
09 Mar to 14 Mar	Mass spectrometry:- Introduction, ion production EI, CI, FD and FAB, factors affecting fragmentation, ion analysis, ion abundance, mass spectral fragmentation of organic compounds	"
16 Mar to 21 Mar	common functional group, molecular ion peak, metastable peak, Nitrogen rule, molecular weight determination of molecular formula from isotopic ratio data, isotope	"
30 Mar to 04 April	House Test profile of halogen compound, factors affecting reaction pathways, fragmentation pattern - simple cleavage, retro - Diels Alder,	"
06 April to 11 April	Hydrogen transfer rearrangement like scrambling, ortho effect, Mclafferty rearrangement,	"
13 April to 18 April	carbon-13 NMR spectroscopy :- General considerations, carbon-13 nucleus, chemical shift and its calculation, proton coupled and	"
20 April to 25 April	decoupled carbon-13 spectra, nuclear overhauser enhancement, cross polarization, problems with integration, molecular relaxation process, off resonance decoupling	"
27 April to 02 May	distortionless enhancement by polarization transfer, heteronuclear coupling of carbon to deuterium, fluorine and phosphorus	"
04 May to 05 May	— Revision —	"

Reference Books:- Pavia, Silverstein, Kalsi

Lecturer

HOD

Adarsh Mahila Mahavidyalaya, Bhiwani

Session 2025-26 (Even Semester)

Lesson Plan from 1st Jan. to 5th May. (UG & PG Classes)

Class with Sem M.Sc. 4th sem Subject Inorganic chem. 22CHE-401 Lecturer Name Ms. Minakshi

Course objectives ....

(i) To know about active transport of active ions.
(ii) To learn about e transfer in Biological System
(iii) To know about of Biotransformation of non metallic Inorganic compound

Week	Topics	Methodology
01 Jan - 3 Jan	Bioinorganic chemistry Na+, K+, Mg2+ Ca2+, Ionophores, active transport of cation across membrane.	Green Board & chalk
05 Jan to 10 Jan	Sodium pump calcium pump, Biochemistry, calcium as hormonal messenger, muscle contraction, Blood clotting	"
12 Jan to 17 Jan	Neurotransmitter effect of metal ions on nucleic acid, Heme proteins	"
19 Jan to 24 Jan	Heme protein of oxygen uptake, Structure and function of Hb, Mb, Hemocyanin of hemerythrin Test of unit I	"
27 Jan to 31 Jan	electron transport in Biological systems & function of metalloprotein in e transfer	"
02 Feb to 07 Feb	Cytochromes & iron sulphur synthesis models. metal storage Type-A, Biomolecules, ferritin, transferrin	"
09 Feb to 14 Feb	Siderophores fixation of dinitrogen, Biologically, Biotransformation of non-metallic inorganic compounds.	"
16 Feb to 21 Feb	Nitrogenase I model for enzyme model for nitrogenase model-N2 complex photosynthesis chlorophyll.	'

Week	Topics	Methodology
23 Feb to 28 Feb	Unit-3 Zinc enzyme - CPA, CA, alkaline phosphate and alcohol dehydrogenase, Iron enzyme	"
01 Mar to 08 Mar	Holi Break	
09 Mar to 14 Mar	Blue copper e⁻ transfer enzyme, molybdenum oxotransferase enzyme Xanthine oxidase Co-enzyme - Vit 12	"
16 Mar to 21 Mar	Test of unit-3 catalase, peroxidase cytochrome P450 & Test of unit-2	"
30 Mar to 04 April	House Test	
06 April to 11 April	Unit-IV Biochemical Basis of essential metals deficiency disease - Iron, copper	"
13 April to 18 April	Different classes of inorganic drugs. , Drugs in hypo & hyper activity	"
20 April to 25 April	Role of zinc in tumor growth & inhibition. Anticancer activity and mechanism of platinum complex	"
27 April to 02 May	Gold complex Antibacterial and antiviral properties of metal complex.	"
04 May to 05 May	Test of unit-IV	

Reference Books:- ajai kumar

Ms. Minakshi
Lecturer

HOD

Adarsh Mahila Mahavidyalaya, Bhiwani

Session 2025-26 (Even Semester)

Lesson Plan from 1st Jan. to 5th May. (UG & PG Classes)

Class with Sem M.Sc II - 4th Sem Subject Chemistry Lecturer Name Ms. Minakshi

Course objectives Practical
1. To know about estimation of Cl ions.
2. To know about estimation of Pb ions
3. To know about estimation of Mg ions.
4. To know about estimation of Cu ions.

Week	Topics	Methodology
01 Jan - 3 Jan	Preparation of hexaurea chromium(III) chloride and estimation of Cl ions in the prepared complex	Green based and chelly and experiment
05 Jan to 10 Jan	Preparation of pure sample of nitrosyl bisdiethyldithiocarbamatoiron(II) and estimation of Fe in the prepared complex	11
12 Jan to 17 Jan	Preparation of hexathiourea plumbous nitrate and estimation of Pb in the prepared complex.	11
[illegible] to 24 Jan	Preparation of tetrathiocyanato mercurate (II) $Co[Hg(SCN)_4]$ and estimation of Mg in the prepared complex.	11
27 Jan to 31 Jan	Preparation of tetramminecopper(II) sulphate $[Cu(NH_3)_4]SO_4$ and estimation of Cu in prepared Complex.	11
02 Feb to 07 Feb	Preparation of dichlorobis(ethylenediamine) zinc(II) $[Zn(NH_2CH_2)_2Cl_2]$ and estimation of zinc in Prepared Complex	11
09 Feb to 14 Feb	Preparation of aluminium acetylacetonate $[Al(C_5H_7O_2)_3]$ and estimation of Cu in prepared Complex.	11
16 Feb to 21 Feb	Preparation of Tetrabipyridine-ferrous chloride and estimation of Fe in the prepared Complex.	11

Week	Topics	Methodology
23 Feb to 28 Feb	Preparation of hexaurea chromium(III) chloride and estimation of Cl ions in the complex fumarate.	Green beaker and cork.
01 Mar to 08 Mar	**Holi Break**	//
09 Mar to 14 Mar	Repeat experiment 1st and second and prepare for VIVA-Voce Question.	//
16 Mar to 21 Mar	preparation of hexathioureaplumbous nitrate and estimation of Fe in prepared complex.	//
30 Mar to 04 April	**House Test**	//
06 April to 11 April	Internal VIVA of 1st & experiment and perform it as well.	//
13 April to 18 April	Preparation of tetraammine Copper sulphate $[Cu(NH_3)_4]SO_4$ and estimation of Cu in prepared Complex.	//
20 April to 25 April	Repeat experiment 4 and 5.	//
27 April to 02 May	Preparation of dichloro bis hydroxyl amine zinc(II) $[Zn(NH_4OH)_2Cl_2]$ and estimation of Zn in prepared Complex	//
04 May to 05 May	Internal VIVA	//

Reference Books:- Vogel's Textbook for Quantitative analysis.

Miraksh
Lecturer

Shikha
HOD

22CHE-404

Adarsh Mahila Mahavidyalaya, Bhiwani

Session 2025-26 (Even Semester)

Lesson Plan from 1st Jan. to 5th May. (UG & PG Classes)

Class with Sem M.Sc. 4th Sem Subject . Chemistry Inor. Lecturer Name Dr. Nisha

Course objectives . To know about spectra & symmetry & different Rules

(2) To know about NMR spectra & its application

(3) To know about NQR, Mass spectroscopy.

Week	Topics	Methodology
01 Jan - 3 Jan	— —	
05 Jan to 10 Jan	Spectra and symmetry, Rules, shapes of different modes of bonding ethylediamine & dikitonate complex charge in spectra.	Chalk & Board
12 Jan to 17 Jan	Bond length, shift relations, Determination of spectra, Spectroscopy.	11
19 Jan to 24 Jan	NMR spectra and different concept related to it. Applica- of spectra.	11
27 Jan to 31 Jan	Structural determination of diff. complex; spectra of paramagnetic materials.	11
02 Feb to 07 Feb	Concept of contact shift, its applications, Diamagnetic complex, spectra of free radicals	11
09 Feb to 14 Feb	Lanthanide shift reagents, magnetic susceptibility, Magnetic angle spinning & its application.	11.
16 Feb to 21 Feb	NQR and different terms related to NQR, Effect of external magnetic field,	11

Week	Topics	Methodology
23 Feb to 28 Feb	Selected example & structural elucidation, diffent aspects of inorganic compound using NQR	"
01 Mar to 08 Mar	Holi Break	
09 Mar to 14 Mar	Mass spectroscopy and its concept & in detail.	"
16 Mar to 21 Mar	Revision of unit Ist and 2nd	
30 Mar to 04 April	House Test	
06 April to 11 April	Effect of isotopes on appearance of mass spectrum, Application of Mass spectroscopy in various fields.	Chalk and Board
13 April to 18 April	Molecular luminescence, introduction Principles of fluorescence & its interpretation, application.	"
20 April to 25 April	circular Dichroism and optical Rotatory Dispersion.	"
27 April to 02 May	Polarized light, fundamental concept optical rotation, configuration of Tris-chelated complexes.	"
04 May to 05 May	Revision.	

Reference Books:- K.L Kapoor, R.D Sharma, Sathyanarayana D.N., Drago, R.S, Nakamoto, Ross, S.D

Lecturer

HOD

Adarsh Mahila Mahavidyalaya, Bhiwani

Session 2025-26 (Even Semester)

Lesson Plan from 1st Jan. to 5th May. (UG & PG Classes)

Class with Sem M.Sc II (4th sem) Subject Chemistry (Practical) Lecturer Name Dr. Nisha

Course objectives To know about different sepration process and different techniques.

Week	Topics	Methodology
01 Jan - 3 Jan	Basic about sepration process.	Practical Method
05 Jan to 10 Jan	To determine flame photometer, atomic absorption spectrophotometer.	"
12 Jan to 17 Jan	To determine turbidimeter, dipolemeter etc.	"
19 Jan to 24 Jan	Repeat experiment.	"
27 Jan to 31 Jan	Repeat experiment.	"
02 Feb to 07 Feb	Theory of stoichiometry	"
09 Feb to 14 Feb	Basic about the complexes	"
16 Feb to 21 Feb	To determine the stiochiometry and stability constant of Fe- thiocynate	"

Week	Topics	Methodology
23 Feb to 28 Feb	Chemical Vapour deposition method electron deposition and characterization of Nanomaterial by X-RD & SEM	Chalk and board
01 Mar to 08 Mar	**Holi Break**	"
09 Mar to 14 Mar	Doubt session class and Energy dispersive X-ray analysis. Transmissio electron microscope TEM, Atomic force microscopy (AFM).	"
16 Mar to 21 Mar	Application of Nanoscience and NanoTechnology in various fieald. and Introduction to Solid State -	"
30 Mar to 04 April	**House Test**	"
06 April to 11 April	Defects and Non-stoichiometry intrinsic and extrinsic defects, point defects, line and plane defect. Valencies Schottky and Frenkel defect	"
13 April to 18 April	Thermodynamics of schottky and Frenkel defect formation, Colour Centres Non-Stoichiometry and defects	"
20 April to 25 April	Metals, insulators and semiconductor Electronic structure of solid - band theory band structure of Metals.	"
27 April to 02 May	Insulator and semiconductor, Electronic structure of solid, extrinsic and intrinsic semiconductor, doping semi conductor, pn junctions.	"
04 May to 05 May	Optical and magnetic properties Solid state lasers, Ruby YAG and tunable lasers Inorganic phosphor matrix-fibre; alloys. Nanowire	"

Reference Books:- Huhee Publication
Vijay Kumar

Lecturer Dr Reena

Bijoka
HOD

Adarsh Mahila Mahavidyalaya, Bhiwani

Session 2025-26 (Even Semester)

Lesson Plan from 1st Jan. to 5th May. (UG & PG Classes)

Advance Topic in Inorganic chemistry

Class with Sem M.Sc 2nd, 4th Sem Subject ..Chemistry. Lecturer Name .Dr. Pooja

Practicals

Course objectives .....(1)....Chromatography Techniques.
(2) To know about Conductometric Titration,
(3) To know about Solvent-Extraction
(4) To know about Ion-Exchange method.

Week	Topics	Methodology
01 Jan - 3 Jan		Experimental 06 check and board
05 Jan to 10 Jan	Introduction to chromatography Techniques. Perform Thin layer chromatography.	1 1
12 Jan to 17 Jan	Perform paper chromatography and thin layer.	1 1
19 Jan to 24 Jan	Solvent extraction method Perform- and Viva Question.	1 1
27 Jan to 31 Jan	Conductometry Titration acid-base and Perform Experiment	1 1
02 Feb to 07 Feb	mastery and Demastery solution and Test	1 1
09 Feb to 14 Feb	Revision of Ist experiment VIVA Question and Practicals.	1 1
16 Feb to 21 Feb	Thin layer chromatography Technique.	1 1

Week	Topics	Methodology
23 Feb to 28 Feb	Paper Chromatography.	experiment chalk and board
01 Mar to 08 Mar	**Holi Break**	
09 Mar to 14 Mar	Solvent extraction method.	"
16 Mar to 21 Mar	Complexometric Titration	"
30 Mar to 04 April	**House Test**	"
06 April to 11 April	Internal Practical exam out of Practical I.	"
13 April to 18 April	Ion- exchange method.	"
20 April to 25 April	Internal Viva	"
27 April to 02 May	Perform 1st two Practical	"
04 May to 05 May	Perform last one Practical	"

Reference Books:- Vogel's Textbook of Quantitative Analysis,
Analytical Chemistry - Principle and Technique Prentice Hall (198

Lecturer Dr. Reena

HOD Ritika

23ENG401

Adarsh Mahila Mahavidyalaya, Bhiwani

Session 2025-26 (Even Semester)

Lesson Plan from 1st Jan. to 5th May. (UG & PG Classes)

Class with Sem M.A.II (IV) Subject Literature & Gender Lecturer Name Dr. Shakuntala

Course objectives Analyze gender representations in Literature
Understand the intersection of literature and gender
Explore feminist perspectives in literature
Developing gender sensitization in students

Week	Topics	Methodology
01 Jan - 3 Jan	Introduction of the Syllabus and Paper Pattern and brief introduction of each and every topic	Discussion Method.
04 Jan to 10 Jan	Introduction of Virginia Woolf and A Room of One's Own	Bi-lingual Method
12 Jan to 17 Jan	Explanation of A Room of One's Own	Direct Method.
19 Jan to 24 Jan	Explanation of A Room of One's Own.	11
27 Jan to 31 Jan	Discussion of Q/As of Unit-I A Room of One's Own	11
02 Feb to 07 Feb	Introduction of Charlotte Bronte and Jane Eyre	Bi-lingual Method
09 Feb to 14 Feb	Explanation of Jane Eyre	Explanation Method
16 Feb to 21 Feb	Explanation of Jane Eyre	11

Week	Topics	Methodology
23 Feb to 28 Feb	Unit-III Saul Bellow & Herzog	Discussion Method
01 Mar to 08 Mar	Holi Break Revision of Unit-I and Unit-II As homework.	
09 Mar to 14 Mar	Unit-III Explanation going on	Bi-lingual Method
16 Mar to 21 Mar	Discussion of Q/A of Unit-III	Bi-lingual Method
30 Mar to 04 April	House Test House Tests are going on	—
06 April to 11 April	Unit-IV Devdutt Pattanaik Shikhandi. Mahadeva	Bi-lingual Method
13 April to 18 April	Unit-IV Vishnu, Urvashi Arjuna, Krishna, Shiva	Bi-lingual Method
20 April to 25 April	Revision of Unit-I and Unit-II	Bi-lingual Method
27 April to 02 May	Revision of Unit III and Unit-IV	Bi-lingual Method
04 May to 05 May	Revision of previous years Q/A and One liner Revision for final Exam.	Bi-lingual Method

Reference Books:- All Text Books and Audio Books of Texts and online lectures on Related Topics and PDF Notes.

Lecturer

HOD

23ENG402

Adarsh Mahila Mahavidyalaya, Bhiwani

Session 2025-26 (Even Semester)

Lesson Plan from 1st Jan. to 5th May. (UG & PG Classes)

Class with Sem M.A-IV(E) Subject Lit from the Margins Lecturer Name Ms. Muskan

Course objectives : Evaluate the impact of marginalised lit.
- Recognise the significance of marginalised narratives.
- critically analysed social issues and power dynamics portrayed in marginalised texts.

Week	Topics	Methodology
01 Jan - 3 Jan	Dalit Literature : Background & Theory. Intro - Dalit Lit. as a Movement	Lecture
05 Jan to 10 Jan	• Definition of Dalit Lit. • Role of B.R. Ambedkar • Dalit Panthers Movement	Textual Reading & Lecture
12 Jan to 17 Jan	Theme : caste, oppression, identity, resistance. Language, realism.	Discussion & Lecture
19 Jan to 24 Jan	• Saran Kumar Limbale : Life and works. • Dalit Aesthetics	Textual Reading & Discussion
27 Jan to 31 Jan	• Introduction - Akkanmashi • Narrative Technique and Language	Textual Reading & Discussion
02 Feb to 07 Feb	• Critical perspective on Akkanmashi • Introduction to Bama	Lecture & Discussion
09 Feb to 14 Feb	• Dalit Feminism and Gender marginality • Background of Sangati	Textual Reading & Discussion
16 Feb to 21 Feb	• Sangati : Structure and narrative style • Themes : Patriarchy, caste,	Lecture & Discussion

Week	Topics	Methodology
23 Feb to 28 Feb	• Introduction – The Autobiography of Sex worker. • Sex Worker and Social Stigma	Lecture & Discussion
01 Mar to 08 Mar	Holi Break	—
09 Mar to 14 Mar	• Nalini Jameela : Life and Context. • Themes : Agency, body politics	Textual Reading & Discussion
16 Mar to 21 Mar	• feminist perspectives • Marginality, voice and self – representation	Lecture & Discussion
30 Mar to 04 April	House Test	—
06 April to 11 April	• Introduction to Tribal literature • oral Traditions and cultural memory	Lecture & Discussion
13 April to 18 April	• North East India and Marginality • Mamang Dai : Life and Works.	Discussion & Lecture
20 April to 25 April	• A Diary of the world : Themes and style • Daughters of the village	Textual Reading
27 April to 02 May	• Gender, Tradition and change. • Tribal identity & ecological concerns	Discussion Lecture
04 May to 05 May	Revision & Practice.	Lecture

Reference Books:- Original Text
Research Paper

Lecturer

HOD

Adarsh Mahila Mahavidyalaya, Bhiwani

Session 2025-26 (Even Semester)

Lesson Plan from 1st Jan. to 5th May. (UG & PG Classes)

Class with Sem M.A Eng IV sem [23ENG4037] Subject Literary Criticism & Theory-III Lecturer Name Anju Rani

Course objectives
- Develop an understanding of fundamental principles of literary theory & criticism
- Develop an acquaintance with various theoritical and critical frameworks up
- Develop a critical thought through the understanding of various literary to early 20th
- theories in different eras. Interpret texual references by foregrounding critical & century concepts.

Week	Topics	Methodology
01 Jan - 3 Jan	Introduction to the syllabus of the paper and exam pattern along with approaches to studying this Paper.	Lecture Method
05 Jan to 10 Jan	Detailed lecture on Literary theories and difference literary Criticism and Literary theory and discussion on the overview of major schools.	Lecture Method
12 Jan to 17 Jan	Introduction to Psychoanalysis and Sigmund Freud as a psychoanalytic thinker. Detailed discussion on Freud's psychoanalysis and literature	Discussion Method.
19 Jan to 24 Jan	A Detailed analysis of the concepts in the text with Diagramatic explanation. And student present a phychoanalytic criticism assignment	Lecture + Discussion
27 Jan to 31 Jan	Introduction to Lacan as a Post-Freudian theorist and Key concept of the text. Detailed lecture on language and Phycho analysis	Lecture Method.
02 Feb to 07 Feb	Detailed discussion on the major concepts of Lacan's essay and comparative study of Freud and Lacan's theories.	Lecture Method.
09 Feb to 14 Feb	A detailed lecture on concept based questions and also application of these two theories on the various writings.	Question Answer Method.
16 Feb to 21 Feb	Introduction to Marxist Literary theory and its thorist Karl Marx, Terry Eagleton and Raymond Williams in context to Society and	Chalk & Board Method.

Week	Topics	Methodology
23 Feb to 28 Feb	A detailed lecture on the key concepts of the text and theoretical terms with close analysis of a literary text through class and discussion	lecture Method
01 Mar to 08 Mar	Holi Break	
09 Mar to 14 Mar	A detailed analysis of the theory cultural Materialism and key concepts of Raymond William's essay.	Lecture Method
16 Mar to 21 Mar	Comparative Study of Terry Eagleton and William. and Close interpretations of their views in contemporary literary	Comparative Method.
30 Mar to 04 April	House Test	
06 April to 11 April	Introduction to the theory. Postmodernism and its key thinker Jean-Francois Lyotard. A detailed lecture on the key concepts of the text	lecture Method.
13 April to 18 April	A deep analysis of Modernism Postmodernism, modern terms, knowledge & power, Metanarrative and Language games.	Lecture Method.
20 April to 25 April	A detailed discussion on the concept based question on these above mentioned theories and presentation by the students.	Discussion and Presentation Method.
27 April to 02 May	Introduction to the writer and key thinker of New Historicism, Stephen Greenblatt. A deep analysis of the key concepts of the text.	Close Reading Method.
04 May to 05 May	Introduction to the Deconstructionist writer Jacques Derrida and key concepts of this essay. Revision of all the key concepts of all the units.	Lecture Method.

Reference Books:- Prescribed authentic texts and Suggestive Readings
Research Papers and Journals
Notes

Lecturer

HOD

Adarsh Mahila Mahavidyalaya, Bhiwani

Session 2025-26 (Even Semester)

Lesson Plan from 1st Jan. to 5th May. (UG & PG Classes)

Class with Sem M.A. 4th Subject Research Methodology and Self-Study (23 ENG 404) Lecturer Name M.A. Nancy

Course objectives ① Demonstrate proficiency in research methodology
② Reflect on personal development through self-study.
③ Integrate theory and practice in self-study

Week	Topics	Methodology
01 Jan - 3 Jan	Introduction to Research and its objectives and its ethics then give an orientation to Research Methodology.	Interactive method
05 Jan to 10 Jan	Give an overview regarding Self study paper and begin with selection of the topic.	Interactive method
12 Jan to 17 Jan	Begin with the sources of the research information and review of existing literature.	Discussion method
19 Jan to 24 Jan	Formatting research Project and Thesis and introduce them thoroughly.	Interactive method
27 Jan to 31 Jan	Give a detailed explanation on Mechanics of Prose from MLA Handbook 9th Edition	Chalk & talk method
02 Feb to 07 Feb	Introduction to spelling and dictionaries, plurals and Punctuation, Commas, Colons dashes and parentheses and hyphens.	Chalk and talk method
09 Feb to 14 Feb	Give a detailed explanation on principles of inclusive language.	Interactive method
16 Feb to 21 Feb	Give an activity to the students to select their own topic. and	Interactive method

Week	Topics	Methodology
23 Feb to 28 Feb	Make the students understand the value of literature review through their self study	Interactive method
01 Mar to 08 Mar	**Holi Break** Make the students revise first two units for house test	
09 Mar to 14 Mar	Give a detailed explanation on documenting sources	Interactive + discussion method
16 Mar to 21 Mar	Give them every core details like Font, indentation double spacing and alignment	Chalk & talk method
30 Mar to 04 April	**House Test**	
06 April to 11 April	Give a detailed lecture on Work Cited & Bibliography and also give differentiation	Chalk & talk method
13 April to 18 April	Make the students practise among them regarding work cited and bibliography	Test method
20 April to 25 April	Make the students learn all the abbreviations regarding research.	Descriptive method
27 April to 02 May	Make the students write a full fledged research paper on their topic given	Chalk & talk method
04 May to 05 May	Provide a check on their research paper properly	Instructive method

Reference Books:- Follow the prescribed book of MLA Handbook 9th Edition + JSTOR research papers for literature review

Lecturer (Manoj)

HOD

Adarsh Mahila Mahavidyalaya, Bhiwani

Session 2025-26 (Even Semester)

Lesson Plan from 1st Jan. to 5th May. (UG & PG Classes)

M.A English [23ENG405(A)]

Class with Sem ..IV.... Subject Indian Mythological Retellings.... Lecturer Name .Anju Rani.....

Course objectives .....

- Be familiar with Indian Mythology and their literary adaptations
- Critically Analyze Indian Mythology and the diverse perspectives of their reinterpretations in literature.
- Develop an understanding of the cultural and traditional significance of Mythological Retellings.

Week	Topics	Methodology
01 Jan - 3 Jan	Introduction to the syllabus of the Paper and exam pattern along with approaches to studying this paper.	Lecture Method.
05 Jan to 10 Jan	Introduction to the writer Amish Tripathi and his writing style in context to Mythological Retellings. Discussion on the topics Myth, facts & history	Discussion Method.
12 Jan to 17 Jan	Introduction to the Novel "Sita: Warrior of Mithila. Discuss the authentic text of this writing along with contemporary interpretations.	Lecture Method
19 Jan to 24 Jan	Use of feminist criticism in this mythological Retelling writing. Close discussion on the question-answer according to university exam pattern of the	Question Answer Method
27 Jan to 31 Jan	Comparative study of traditional writings and modern Retellings in context to this novel. Introduction to the writer Pratibha Ray and her writing style.	Comparative Method.
02 Feb to 07 Feb	Introduction to the novel "Yajnaseni" (trans. by Pradip Bhattacharya. Discuss the authentic text of this writing along with contemporary interpretators.	Close Reading Method.
09 Feb to 14 Feb	Use of feminist criticism in this mythological Retelling writing. Discussion on the question answer according to exam pattern of uni	Question-Answer Method.
16 Feb to 21 Feb	Comparative study of traditional writings and modern Retellings in context to this novel. Comparative study of different	Comparative Method.

Week	Topics	Methodology
23 Feb to 28 Feb	Revision of the novel "Sita: warrior of Mithila" by narrating the whole story in class along with important points occuring in the novel and presentation by students	Presentation Method.
01 Mar to 08 Mar	**Holi Break**	
09 Mar to 14 Mar	Revision of the novel: "Yajnaseni: A story of Draupadi." by narrating the whole story in class along with important points occuring in the novel and give task to student	Narration Method.
16 Mar to 21 Mar	A task based activity in which students need to present their topic from these two novels with their indepth insights.	Task-based Method.
30 Mar to 04 April	**House Test**	
06 April to 11 April	Introduction to the writer Anand Neelakantan and his writing style in content to Mythological Retellings Introduction to the novel "Asura: A Tale of the Vanquished."	Lecture Method
13 April to 18 April	Discuss the authentic text of his writing along with contemporary interpretations. Discuss the ideological concepts of criticism regarding to this novel.	Close Reading Method.
20 April to 25 April	Discussion on the question-answers as according to exam point of view. Comparative study of traditional writings and modern Retellings	Lecture Method.
27 April to 02 May	A detailed lecture on the terms given in the unit I from its prescribed book and the analysis of these terms by the examples from the prescribed novels in the paper	Lecture Method
04 May to 05 May	Revision of the novel "Asura" by narrating the whole story in class along with important points occuring in the novel Revision of the terms in Unit I	Discussion Method

Reference Books:- Prescribed authentic texts and suggestive Readings.
Notes and research papers & Journals -

Lecturer

HOD

Course Code : 23ENG406 (C)

Adarsh Mahila Mahavidyalaya, Bhiwani

Session 2025-26 (Even Semester)

Lesson Plan from 1st Jan. to 5th May. (UG & PG Classes)

Class with Sem M.A II / IV th sem Subject Indian writings in English Translations Lecturer Name Lavisha Sharma

Course objectives TO Explore cultural nuances in translated works.
TO Examine themes & motifs across translated texts
To recognize the significance of translated voices.

Week	Topics	Methodology
01 Jan - 3 Jan	Unit – I Introduction to Ghalib. Introduction to " Yeh Na Thi Hamaari kismat ".	Lecture Method.
05 Jan to 10 Jan	Explanation of " Hazaaron khawaahshein Aisi ". Discussed Q+Ans.	Explaination + Discussion.
12 Jan to 17 Jan	Introduction to Amrita Pritam and her work. "The Revenue Stamp".	Lecture Method.
19 Jan to 24 Jan	Unit – I Completed the text and Discuss Q+Ans, theames & title of the text.	Discussion.
27 Jan to 31 Jan	Unit – II Introduction to UR Anantmurthy and his work Samskara.	Lecture
02 Feb to 07 Feb	Discussed the text + Characters & themes of the text.	Discussion
09 Feb to 14 Feb	Discussed detailed explaination of the text & Symbols.	Explaination + Discussion
16 Feb to 21 Feb	Unit – II Discussed Q+Ans of the text + title.	Discussion.

Week:	Topics	Methodology
23 Feb to 28 Feb	Unit - II Introduction to Vijay Tendulakar & his work Silence! The court is in session.	Lecture
01 Mar to 08 Mar	**Holi Break**	—
09 Mar to 14 Mar	Unit - III Detailed Discussion of the characters & Text.	Discussion
16 Mar to 21 Mar	Unit - III Completed Text & Discussed Q+Ans + Title + Themes of the Text.	Discussion
30 Mar to 04 April	**House Test**	—
06 April to 11 April	Unit - IV Introduction to Rabindranath Tagore and his work Muktadhara.	Lecture.
13 April to 18 April	Detailed discussion of the text Muktadhara.	Explaination
20 April to 25 April	Completed text and discussed Q+Ans of the text.	Discussion
27 April to 02 May	Revision.	—
04 May to 05 May	Revision.	—

Reference Books:- Exam Notes of KVK, Wikipedia, Litschart, Text Bo

Lecturer Lavisha Sharma

HOD

Course Code: 25 ENG 201

Adarsh Mahila Mahavidyalaya, Bhiwani

Session 2025-26 (Even Semester)

Lesson Plan from 1st Jan. to 5th May. (UG & PG Classes)

Class with Sem M.A I st, sem II nd Subject British Poetry Lecturer Name Lavisha Sharma

Course objectives: To Analyze poetic works from the Augustan to Romantic age & understand their contribution to English literature. To understand the social, historical and cultural context influencing these poems.

Week	Topics	Methodology
01 Jan - 3 Jan	Unit - I Discussed about Robert Southey, Lord Byron, Elizabeth Barrett Browning	Discussion
05 Jan to 10 Jan	Discussed about Christina Rossetti; G.M Hopkins, Dylan Thomas, Philip Larkin, Ted Hughes. Unit - II	Lecture
~~17 Jan~~ 12 Jan to	Introduction to William Words worth & his poem "Tintern Abbey".	Discussion
19 Jan to 24 Jan	Introduction to ST Coleridge and his poems "Frost at Midnight", "Kubla Khan".	Discussion
27 Jan to 31 Jan	completed the poem and Introduction to Non-Detailed study about Poets.	Explaination
02 Feb to 07 Feb	Introduction to John Keats and Discussed his poem 'Ode to the Nightingale".	"
09 Feb to 14 Feb	Introduction to P.B Shelley and his poem "Ozymandias".	"
16 Feb to 21 Feb	Unit - III Introduction to Robert Browning's "My Last Duchess",	"

Week	Topics	Methodology
23 Feb to 28 Feb	completed the poem "The last Ride Together". Introduction to lord Tennyson.	Lecture.
01 Mar to 08 Mar	**Holi Break**	
09 Mar to 14 Mar	completion of 'The Lotus Eaters" & Discussion of its themes & symbols.	Discussion
16 Mar to 21 Mar	Discussed "Ulysses". Introduction to Matthew Arnold & his poem "The scholar Gypsy".	Lecture
30 Mar to 04 April	**House Test**	
06 April to 11 April	Unit - III completion of "Dover Beach" Detailed discussion of unit - III.	Explaination + Discussion
13 April to 18 April	Unit - IV Introduction to T.S. Eliot. and his poem "Love Song of J. Alfred Prufrock".	Lecture
20 April to 25 April	Introduction to W.B Yeats and "The Second coming".	Discussion
27 April to 02 May	completion of "A Prayer for my Daughter". Introduction to W.H Auden and "The Shield of Achilles".	Lecture
04 May to 05 May	completion of "The Unknown citizen" and "O what is that sound". Revision.	Discussion.

Reference Books:- Poetry foundation, 15 Poets, Exam Notes, Lyrical Balads.

Lecturer Lavisha Sharma

HOD

Adarsh Mahila Mahavidyalaya, Bhiwani

Session 2025-26 (Even Semester)

Lesson Plan from 1st Jan. to 5th May. (UG & PG Classes)

Class with Sem M.A.I. (II) Subject Drama. Lecturer Name Dr. Shakuntala

Course objectives Students will learn- 25ENG202,
different forms of Drama and the knowledge of Modern Drama. The effect of Drama on Society and the role of Drama to reflect the Society.

Week	Topics	Methodology
01 Jan - 3 Jan	General Introduction of Drama and the whole Syllabus of Drama.	Discussion Method
05 Jan to 10 Jan	Unit-I The Revival of the Poetic Drama in Twentieth Century Kitchen Sink Drama, Epic Theatre	Bi-lingual Method
12 Jan to 17 Jan	Oscar-Wilde-The Importance of Being Earnest, T.S. Eliot Reunion.	〃
19 Jan to 24 Jan	John Galsworthy : The Silver Box Graham Greene : The Living Room Somerset Maugham : The Constant Wife	〃
27 Jan to 31 Jan	Sean O'Casey The Shadow of a Gunman Samuel Beckett Waiting for Godot	〃
02 Feb to 07 Feb	Unit-II Arms and the Man	〃
09 Feb to 14 Feb	Unit-II Arms and the Man	〃
16 Feb to 21 Feb	Unit-III Look Back in Anger	〃

Week	Topics	Methodology
23 Feb to 28 Feb	Unit-III Look Back in Anger	Bi-lingual method
01 Mar to 08 Mar	Holi Break Do Revise Unit-I and Unit-II as Holiday Homework	
09 Mar to 14 Mar	Revision of Unit-III	Traditional method
16 Mar to 21 Mar	Unit-IV The Homecoming	"
30 Mar to 04 April	House Test House Tests are Going one	"
06 April to 11 April	Unit-IV The Homecoming	Presentation method
13 April to 18 April	Revision of Unit-I, II	Project Method
20 April to 25 April	Revision of Unit III & IV	"
27 April to 02 May	Previous Years Q1s and Important PDF Notes Revision	Traditional method
04 May to 05 May	All important facts and one liner Revision of All Units. How to handle tricky Questions in exams. How to attempt Paper.	Discussion method

Reference Books:- Text books and Online Sources

Sfdr
Lecturer

HOD

25ENG203

Adarsh Mahila Mahavidyalaya, Bhiwani

Session 2025-26 (Even Semester)

Lesson Plan from 1st Jan. to 5th May. (UG & PG Classes)

Class with Sem M.A. I. Subject Lit Theory & Criticism I Lecturer Name Mukhan Panwar

Course objectives • Develop an understanding of fundamental principles of literary theory and criticism. • Develop a critical thought the understanding of various literary

Week	Topics	Methodology
01 Jan - 3 Jan	• Introduction to Aristotle. • Aristotle as a classic critic • Plato vs Aristotle (basic contrast)	Textual Reading & Lecture
05 Jan to 10 Jan	• concept of Mimesis • Poetry vs History • Aim of Poetry according to Aristotle.	Lecture & Textual Reading
12 Jan to 17 Jan	• Tragedy: definition & six elements Plot, Character, Thought,	Lecture & Textual Reading
19 Jan to 24 Jan	• Plot simple vs complex • Unity of Action	Textual Reading & Lecture
27 Jan to 31 Jan	• Hamartia, Anagnorisis Catharsis • Preface to Lyrical Ballad	Textual Reading & Lecture
02 Feb to 07 Feb	• Wordsworth as a Romantic critic • Purpose of poetry,	Lecture & Discussion
09 Feb to 14 Feb	• Definition of Poetry, Role of poet. • emotion recolled in Tranq.	Lecture & Discussion
16 Feb to 21 Feb	Matthew Arnold. - The study of Poetry • Victorian Criticism	Text & Discussion

Week	Topics	Methodology
23 Feb to 28 Feb	Arnold as a critic : function of poetry Touchstone Method High Seriousness	Lecture Method
01 Mar to 08 Mar	**Holi Break**	—
09 Mar to 14 Mar	• The function of criticism • Eliot as a critic • function of criticism	Lecture & Discussion
16 Mar to 21 Mar	• criticism & creativity • Eliot critical principles	Lecture & Discussion
30 Mar to 04 April	**House Test**	—
06 April to 11 April	• Horace – Ars Poetica • Longinus – On the Sublime	Textual Reading & Discussion
13 April to 18 April	• An Apology for Poetry • An Essay on criticism	Textual Reading & Discussion
20 April to 25 April	• Biographia Literaria Ch XVII - XVIII • Essay of Dramatic Poesy.	Discussion & Textual R.
27 April to 02 May	• Preface to Shakespeare • Defence of Poetry	Discussion & Textual Reading
04 May to 05 May	• Heresy of paraphrase • Revision	Discussion & Textual Reading

Reference Books:- Original Text
Research Paper

Mushan Panwar
Lecturer

HOD

Adarsh Mahila Mahavidyalaya, Bhiwani

Session 2025-26 (Even Semester)

Lesson Plan from 1st Jan. to 5th May. (UG & PG Classes)

Class with Sem M.A English II Subject Indian Writings in English-II Lecturer Name Avjit Rani

Course objectives Develop an understanding of key issues shaping [25ENG1205] twentieth century Indian literature in English
• understand the narrative techniques and thematic concern of the various literary writings
Be Acquainted with the socio-political, regional and cultural perspectives in the Prescribed texts.

Week	Topics	Methodology
01 Jan - 3 Jan	Introduction to the syllabus of the paper and exam pattern along with approaches to studying this paper.	Chalk & Board Method.
05 Jan to 10 Jan	Detailed lecture on Meany and scope of Indian writig in English, historical backgrounds and Major genres throughout various phases of indian writings.	Lecture Method.
12 Jan to 17 Jan	Familiarize students with the major writers and themes prescribed in unit I and detailed discussion on the growth of Indian writing in English.	Class discussion & Lecture Method
19 Jan to 24 Jan	Introduction to the modern Indian poet Nissim Ezekeil and his style and language along with major themes of his writings	Lecture Method.
27 Jan to 31 Jan	line by line Explanation of Ezekiel's prescribed poems in the syllabus and interpretation of these poms with question-answers	Close Reading Method
02 Feb to 07 Feb	Introduction to the modern Indian poet A.K. Ramanujan and his writing style and language along with major themes of his writings	Lecture Method.
09 Feb to 14 Feb	line by line explanation of Ramanujan's poems prescribed in syllabus and interpretations of these poem with question-ans.	Question-answer discussion Method.
16 Feb to 21 Feb	Discussion on the remaining poems of the writer along with detailed analysis of major themes and key concepts	lecture Method

Week	Topics	Methodology
23 Feb to 28 Feb	Comparative study of Nissim Ezekiel and A. K. Ramanujan Poetry including their writing style and major themes.	comparative Method
01 Mar to 08 Mar	**Holi Break**	
09 Mar to 14 Mar	Introduction to the female Indian writer Meena Kandasamy and detailed lecture on her relevance in Dalit writing and Feminism	Close Analysis Method
16 Mar to 21 Mar	Line by line explanation of Kandasamy's poems prescribed in syllabus along with conceptual interpretation of her writings.	close Reading Method.
30 Mar to 04 April	**House Test**	
06 April to 11 April	Discussion on the concept based questions according to exam point of view of first two units.	Discussion Method
13 April to 18 April	Introduction to the Psychological Realism in Indian English fiction and its renowned writer Anita Desai, her writing style & language	Lecture Method.
20 April to 25 April	Discussion on the major themes of her writing and detailed analysis of the text "Cry the Peacock"	Lecture & Close Reading Method.
27 April to 02 May	Discussion on the concept based questions as according to exam point of view of the unit. Introduction to the writer Girish Karnad.	Question Answer Method.
04 May to 05 May.	Discussion on the major themes of his writings and detailed analysis of the text "Hayavadana" with concept based Question Revision of all the units.	Lecture Method

Reference Books:- Prescribed authentic texts and Suggestive Readings.
Research Papers & Journals
Notes

Lecturer

HOD

Adarsh Mahila Mahavidyalaya, Bhiwani

Session 2025-26 (Even Semester)

Lesson Plan from 1st Jan. to 5th May. (UG & PG Classes)

Class with Sem M.A. 2nd Subject Linguistics II (PSENG204) Lecturer Name Ms. Nancy

Course objectives ...To...apply.. a comprehensive mastery of English linguistics, from its historical evolution to its diverse varieties, in performing expert stylistic analysis of literary texts.

Week	Topics	Methodology
01 Jan - 3 Jan	Introduction to phonology and discuss applied linguistics	Interactive method
05 Jan to 10 Jan	Orientation to stylistics and how it is connected to literature and after take up style and deliver a detailed lecture on it	Interactive + Descriptive method
12 Jan to 17 Jan	In unit 1st., deliver an overview of Defamiliarization and Deviation, Parallelism including in it.	Descriptive method
19 Jan to 24 Jan	Give a descriptive lecture on Defamiliarization, Deviations and parallelism with examples	chalk & talk method
27 Jan to 31 Jan	Introduction to unit 2nd, and commence with the topics Pragmatics and Rhetoric and then introduce Speech Act	Interactive method
02 Feb to 07 Feb	Orientation class on rhetoric and Searle and take up the presentation of students on rhetorical devices	R & H method
09 Feb to 14 Feb	Presentation on Rhetorical device continued and explain speech act throughly.	Descriptive method
16 Feb to 21 Feb	Introduction to Socio-linguistics in unit III and	lecture method

Week	Topics	Methodology
23 Feb to 28 Feb	Explanation of Idiolect, Dialect, standard Language throughly with explanation.	Interactive method
01 Mar to 08 Mar	**Holi Break** Make the students revise the first two units throughly for house test	
09 Mar to 14 Mar	Commence with detailed explanation of registers, Discourse and Diglossia	Inter-active method
16 Mar to 21 Mar	Introduction to the varieties of English Language, American English and General Indian Eng.	Interactive method
30 Mar to 04 April	**House Test**	
06 April to 11 April	Introduction to Semantics and the meaning of words and sentences from the Routledge Handbook of Linguistics	Interactive method
13 April to 18 April	Give a detailed explanation of the meaning of words and Sentences.	Explanatory method
20 April to 25 April	Introduction to the stylistic analysis of an extract from poetry.	Chalk and talk method
27 April to 02 May	Give a detailed explanation of an extract from prose and a drama text.	Chalk and talk method
04 May to 05 May	Make the students practise regarding stylistic analysis of prose and drama.	Chalk and talk method

Reference Books:- Follow e-PG Pathshala and Vidya-mitra from inflibnet and the prescribed book 'The Routledge Handbook of Linguistics'

Lecturer

HOD

25 ENG 207

Adarsh Mahila Mahavidyalaya, Bhiwani

Session 2025-26 (Even Semester)

Lesson Plan from 1st Jan. to 5th May. (UG & PG Classes)

Class with Sem M.A. II Sem. Subject Ancient Indian wisdom in English Lecturer Name Muskan Panwar

Course objectives
- Understanding ancient Indian philosophy
- Indentifying and explaining key concept of ancient Indian wisdom
- Applying ancient Indian wisdom in life.

Week	Topics	Methodology
01 Jan - 3 Jan	Course orientation & objectives overview of Indian knowledge System	Lecture Method
05 Jan to 10 Jan	Relevance of Ancient Indian wisdom in English Studies	Lecture Method
12 Jan to 17 Jan	Introduction to the vedas Four vedas: Rig, Yajur, Sama, Arthaiva.	Textual Reading and Discussion
19 Jan to 24 Jan	Structure and purpose of all four vedas.	Lecture & Textual reading
27 Jan to 31 Jan	Samhitas : meaning Themes, oral tradition	Textual reading & Lecture
02 Feb to 07 Feb	• Role of hymns and rituals. • Brahmanas : prose texts	Textual reading and Lecture
09 Feb to 14 Feb	• Ritual Explanations. • Transition from rituals	Lecture & Discussion
16 Feb to 21 Feb	Brahmanas : prose texts & ritual explanations.	Lecture and Discussion

Week	Topics	Methodology
23 Feb to 28 Feb	Aranyakas : Texts Shift from ritual to contemplation	Textual reading & interpretation
01 Mar to 08 Mar	Holi Break	—
09 Mar to 14 Mar	• Upanishads - concept, importance • Brahman, Atman, Moksha introductory ideas.	Textual reading & Discussion
16 Mar to 21 Mar	Major philosophical ideas from the upnishads. Selected examples.	Textual reading & Discussion
30 Mar to 04 April	House Test	—
06 April to 11 April	Introduction to Atharva veda Background of Prithvi Sukta Prithvi Sukta verse (1-6)	Textual reading
13 April to 18 April	Prithvi Sukta verse (7-12) Harmony b/w Humans and nature. verse (13-18) ethical Living & Sustainability	Textual reading & Discussion
20 April to 25 April	Introduction to Srimad Bhagvad Gita, chapter 18 context & philosophical setting	Textual reading & Discussion
27 April to 02 May	verse (19-23) : Threefold division of karma Sattvic, Rajasic, Tamasic	Textual reading & Discussion
04 May to 05 May	Revision & Model Ques. Practice.	Test & Revision

Reference Books:- Original Texts
Research Papers

Muskan Panwar

HOD

Adarsh Mahila Mahavidyalaya, Bhiwani

Session 2025-26 (Even Semester)

Lesson Plan from 1st Jan. to 5th May. (UG & PG Classes)

Class with Sem M.Sc. 1st Yr (2nd Sem) Subject Electronics and circuits II Devices .... Lecturer Name Ms. Tanvi

Course objectives After studying this course students develop a understanding of basics of OP-Amps.

Week	Topics	Methodology
01 Jan - 3 Jan	Basic structure and operation of JFET, calculation, characteristics of JFET.	Lecture Method
05 Jan to 10 Jan	MOSFET - Physical structure, operation and characteristics, enhancement and depletion modes	Lecture Method
12 Jan to 17 Jan	MESFET, common source and common drain FET amplifiers, FET biasing, FET as a voltage variable resistor	Lecture Method
[illegible]	[illegible] self biased and a connected bistable multivibrators, Schmitt trigger, collector coupled and emitter coupled	[illegible] Method
27 Jan to 31 Jan	OPAMP - inverting and non-inverting amplifier, effect of negative feedback, Differential Amplifier, CMRR	Lecture Method
02 Feb to 07 Feb	Emitter coupled differential amplifier, transfer characteristics of a differential amplifier,	Lecture Method
09 Feb to 14 Feb	IC OPAMP and its ac analysis, offset voltage and currents, universal balancing techniques.	Lecture Method
16 Feb to 21 Feb	Measurement of OPAMP parameters, UJT - working principles, characteristics and principles pnpn, tunnel diode	Lecture Method

Week	Topics	Methodology
23 Feb to 28 Feb	Digital operation of system, logic system OR, AND, NOT EXOR, NAND, Demorgan's theorem	Lecture Method
01 Mar to 08 Mar	Holi Break	
09 Mar to 14 Mar	Boolean algebra, Modified DTL gates, transistor, transistor, mixed logics, HTL gates, TTL gates.	Lecture Method
16 Mar to 27 Mar	output stages for TTL gates RTL gates, direct coupled transistor inverter gates.	Lecture Method
30 Mar to 04 April	Phase Test	
06 April to 11	RTL gates, MOSFET, CMOS logic gates, K Map	Lecture Method
	Radiative and non-radiative transitions	Lecture Method
	Operation, characteristics and application of various LDR, Photodiodes	Lecture method
	p-n diodes, Metal Semiconductor photodiodes, avalanche photodiode	Lecture Method
	LED's, Semiconductor diode lasers, phototransistors resistance thermometers	Lecture Method

1. Integrated Electronics by T. Millman and C. Halkias
2. Physics of Semiconductor Devices by S. M. Sze

Teacher

HOD

Adarsh Mahila Mahavidyalaya, Bhiwani

Session 2025-26 (Even Semester)

Lesson Plan from 1st Jan. to 5th May. (UG & PG Classes)

Class with Sem M.Sc. Physics (4th Sem) Subject Electronics-II Lecturer Name Ms. Tanvi

Course objectives .After studying this topic, students will be able to understand about microprocessors.

Week	Topics	Methodology
01 Jan - 3 Jan	Tunnel Diode, Backward diode, Uni-Junction transistor; p-n-p-n devices, p-n-p-n characteristics	Lecture Method
05 Jan to 10 Jan	Thyristors, Silicon controlled switch, SCR and SCS characteristics Semiconductor Memories	Lecture Method
12 Jan to 17 Jan	ROM, PROM and EPROM, Ram, Static and DRAM, Content addressable memory.	Lecture Method
19 Jan to 24 Jan	Advanced memories, Buffer registers, Bus organised computers, SAP-I	Lecture Method
27 Jan to 31 Jan	Microprocessor 8085 Architecture, memory interfacing, interfacing I/O devices.	Lecture Method
02 Feb to 07 Feb	Assembly language programming: Instruction classification	Lecture Method
09 Feb to 14 Feb	Addressing modes, Op code and operand, fetch and execute cycle	Lecture Method
16 Feb to 21 Feb	Timing diagram, machine cycle, instruction cycle and T states, data transfer, logic and branch operation	Lecture Method

Week	Topics	Methodology
23 Feb to 28 Feb	Architecture of µProcessor 8085, Pin description for minimum and maximum modes	Lecture Method
01 Mar to 08 Mar	**Holi Break**	
09 Mar to 14 Mar	Internal operation, Addressing modes, memory interfacing examples based on addressing scheme	Lecture Method
16 Mar to 21 Mar	Instruction format for constructing machine language codes. Revision of unit 1,2	Lecture Method
30 Mar to 04 April	**House Test**	
06 April to 11 April	Instruction set and directives Stacks, Procedures, Macros data transfer scheme.	Lecture Method
13 April to 18 April	Silicon planer process, crystal growth, wafer production, thermal oxidation, high pressure oxidation	Lecture Method
20 April to 25 April	concentration enhanced oxidation, chlorine oxidation, lithography & pattern transfer, etching process	Lecture Method
27 April to 02 May	Dopant addition, ion implantation, diffusion, CVD, expetaxial and non epitaxial films	Lecture Method
04 May to 05 May	Monolithic IC technology, BJT fabrication, fabrication of FET/ NMOS enhancement and unipolar depletion transfer, fabrication of CMOS	Lecture Method

Reference Books:- 1. Microprocessor Architecture, Programming and Applications with 8085, R.S. Goankar
2. Integrated Electronics by J. Millman

Tanvir
Lecturer

HOD

Adarsh Mahila Mahavidyalaya, Bhiwani

Session 2025-26 (Even Semester)

Lesson Plan from 1st Jan. to 5th May. (UG & PG Classes)

Class with Sem M.Sc. 1st/3rd Sem Subject Nuclear Phy. Lecturer Name Dr. Deepanshi

Course objectives ① Knows about basic properties of Nuclear forces.
② Learn about various types of detectors.
③ Learn about diff. elementary particles.

Week	Topics	Methodology
01 Jan - 3 Jan	Introduction of Nuclear & Particle Physics	Lecture method
05 Jan to 10 Jan	Unit-1:- Interaction of charged particles with matter: Description of various energy loss mechanisms	"
12 Jan to 17 Jan	Classical stopping power equation for electronic energy loss. Energy straggling & range.	"
19 Jan to 24 Jan	Interaction of gamma radiation with matter: features of photo-electric & compton symmetry.	"
27 Jan to 31 Jan	Nuclear forces:- isospin, meson theory. Intro of unit 2.	"
02 Feb to 07 Feb	Unit-2:- Gamma ray spectrometer, basic principle & working of NAI detector	"
09 Feb to 14 Feb	Semiconductor detectors:- Basic principle, construction & working of Si surface barrier detectors	"
16 Feb to 21 Feb	Nuclear reactions:- Q value, elementary idea of compound nuclear reactions.	"

Week	Topics	Methodology
23 Feb to 28 Feb	Concept of neutron detection, coulomb excitation. Introduction of nuclear properties.	Lecture method
01 Mar to 08 Mar	**Holi Break**	"
09 Mar to 14 Mar	Unit 3:- Basic nuclear properties, Binding energy, semi-empirical mass formula; Liquid drop model	"
16 Mar to 21 Mar	Deutron problem: Ground state, magnetic moment; radioactive decays:- Tunnel Theory.	"
30 Mar to 04 April	**House Test** (Unit 1 and 2)	
06 April to 11 April	Fermi theory. Unit-4:- Particle Physics:- Classification of particles	"
13 April to 18 April	Strange particles. Basic idea of diff fundamental types of interactions.	"
20 April to 25 April	Quarks flavors & their Quantum no.; Quarks as Hadrons. Quark confinement.	"
27 April to 02 May	Quark model, decay of pion & muon; Gell-Mann Nishijima formula.	"
04 May to 05 May	Conservation laws & remedial class of all unit problems.	"

Reference Books:- ① Nuclear Physics by S.N. Ghoshal.

② Introductory to High Energy Particles by Kenneth

Lecturer

HOD

Adarsh Mahila Mahavidyalaya, Bhiwani

Session 2025-26 (Even Semester)

Lesson Plan from 1st Jan. to 5th May. (UG & PG Classes)

Class with Sem M.Sc. 2nd (4th Sem) Subject Statistical mechanics Lecturer Name Dr. Deepanshi

Course objectives .....

① Gain knowledge about foundations of Statistical mechanics

② Learn about ensembles, fermi gas, phase transitions.

Week	Topics	Methodology
01 Jan - 3 Jan	Unit-1 Introduction to Statistical mechanics: microscopic & macroscopic states.	Lecture method
05 Jan to 10 Jan	Relation b/w Statistics & thermo. Entropy of mixing & Gibbs paradox. Ensemble theory.	"
12 Jan to 17 Jan	Ensemble, phase space, Liouvillies theorem, Stationary ensemble, microcanonical ensemble.	"
19 Jan to 24 Jan	Application to classical ideal gas. Canonical partition function, Thermodynamics of a system	"
27 Jan to 31 Jan	Non interacting classical harmonic oscillators. Unit-2:- Grand canonical	"
02 Feb to 07 Feb	ensemble & partition function. Energy & density fluctuations.	"
09 Feb to 14 Feb	Quantum Mechanical Ensemble Theory: ensemble average. Two types of statistical Quantum.	"
16 Feb to 21 Feb	Ideal bose gas: Internal, equation of state; bose Einstein cond. in ultra-cold atomic gases	"

Week	Topics	Methodology
23 Feb to 28 Feb	Black body radiations. Unit-3 :- Ideal fermi gas :- Internal energy, eq. of state	Lecture method
01 Mar to 08 Mar	**Holi Break**	—
09 Mar to 14 Mar	Completely degenerate fermi gas, electron gas in metals, Thermionic emission	"
16 Mar to 21 Mar	Simple cluster integrals, Mayer - Ursell relations, Virial expansion, Van-der-Walls exp.	"
30 Mar to 04 April	**House Test** (Unit 1 & 2)	—
06 April to 11 April	Validity of cluster expansion method. Lattice Phase transitions Ising model	"
13 April to 18 April	Bragg - William approximation, Kandau theory of phase transition, Scaling hypothesis :- 1 & 2 D.	"
20 April to 25 April	Ising model. Thermodynamic fluctuations & their probability distributions law.	"
27 April to 02 May	Spatial oscillations in a fluid, Brownian motion; Connection b/w density fluctuations & Spatial correlations	"
04 May to 05 May	Remedial class of all unit problems.	"

Reference Books:- ① Statistical Mechanics by R.K. Pathria
② Statistical & Thermal Physics by F. Rey

Lecturer

HOD

Adarsh Mahila Mahavidyalaya, Bhiwani

Session 2025-26 (Even Semester)

Lesson Plan from 1st Jan. to 5th May. (UG & PG Classes)

Class with Sem M.Sc-2nd (4th sem) Subject ..EXP. Tech. Lecturer Name ..Indu Vashistha

Course objectives ..... To understand the Concepts of Experimental Techniques.

Week	Topics	Methodology
01 Jan - 3 Jan	Experimental Techniques to observe the defects in Lattice: Electron Microscopy: TEM, X-ray	Lect. Method
05 Jan to 10 Jan	Diffraction Techniques. Experimental Method of observing dislocations and stacking faults	〃
12 Jan to 17 Jan	Optical Techniques: Photo Luminescence, FTIR and Raman Spectroscopic Techniques.	〃
19 Jan to 24 Jan	UNIT-II: Surface Analytical Techniques: Electron Spectroscopics – Auger	〃
27 Jan to 31 Jan	XPS (ESCA), UV Photo emission, X-ray Absorption techniques: EXAFS NEAFS.	〃
02 Feb to 07 Feb	Secondary ion mass spectroscopy, Rutterford Back Scattering	〃
09 Feb to 14 Feb	Low energy electron diffraction techniques.	〃
16 Feb to 21 Feb	Test of Unit-I. Unit-III: Opto Electronic devices.	〃

Week	Topics	Methodology
23 Feb to 28 Feb	Solar cells, Photo Diodes Photo Detectors, LED'S Data interpretation and Analysis.	Lect. Method
01 Mar to 08 Mar	**Holi Break**	
09 Mar to 14 Mar	Precision and Accuracy Error Analysis, Propagation of Errors, Least square fitting	"
16 Mar to 21 Mar		
30 Mar to 04 April	Li **House Test**	
06 April to 11 April	Linear and Non Linear curve fitting, chi-square test, Modulation Techniques Amplitude Modulation.	"
13 April to 18 April	UNIT-IV: Test of Unit II. Spectroscopic and scanning Probe Techniques.	"
20 April to 25 April	Detailed Study of Spectroscopic Techniques: ESR and NMR. Scanning Probe techniques.	"
27 April to 02 May	STM, AFM, STS	"
04 May to 05 May	Test of Unit-III and Revision of Unit-IV	"

Reference Books:- X-ray crystallography by Azaroff.
EXP. tech by Woodruff and Dexchar

Lecturer HOD

Adarsh Mahila Mahavidyalaya, Bhiwani

Session 2025-26 (Even Semester)

Lesson Plan from 1st Jan. to 5th May. (UG & PG Classes)

Class with Sem ..M.Sc.-Ist (2nd sem) Subject ..QM-II.. Lecturer Name ....Indu Vashist

Course objectives .....
To understand the concept of QM.

Week	Topics	Methodology
01 Jan - 3 Jan	Approximate methods for bound states-I: Stationary Perturbation theory: Non-degenerate case. First order	Lect. Method
05 Jan to 10 Jan	and second order corrections to energy eigen values and eigen functions, Perturbation of- an oscillator	〃
12 Jan to 17 Jan	Ground state of- He-atom; Degenerate case- Removal of- degeneracy in first and	〃
19 Jan to 24 Jan	Second order; Zeeman effect without electron spin; First order Stark effect in n=2 state of- H atom.	〃
27 Jan to 31 Jan	Fine structure of- Hydrogen atom. variational Method. Unit-II:- Approximate Method for bound states-II	〃
02 Feb to 07 Feb	The WKB approximation: classical limit, Approximate Solutions, Asymptotic nature of- solutions. Solution near	〃
09 Feb to 14 Feb	a turning Point, Linear turning point, Connection at the turning Point, Asymptotic Connection formulae	〃
16 Feb to 21 Feb	Application to energy level of a quatum well, tunneling through a Potential barrier and α-decay	〃

Week	Topics	Methodology
23 Feb to 28 Feb	First order time dependent Perturbation theory, Transition Probability for Constant and harmonic Perturbation Theory.	Lect Method
01 Mar to 08 Mar	**Holi Break**	
09 Mar to 14 Mar	UNIT-III: Selected applications of QM: Atomic Structure of Many-electron atoms:	〃
16 Mar to 21 Mar	Central field approximation, Periodic systems of elements, Thomas-Fermi statistical model.	〃
30 Mar to 04 April	**House Test**	
06 April to 11 April	Evaluation of the Potential Hartree's Self-Consistent with the Variational.	〃
13 April to 18 April	Correction to the central field approximation, L-S and J-J Coupling.	〃
20 April to 25 April	Unit-IV: Quantum theory of Scattering: Scattering Experiments and cross section	〃
27 April to 02 May	The laboratory and Centre of mass systems. Scattering amplitude and Cross Section.	〃
04 May to 05 May	The method of Partial waves: Phase Shift, Differential and total Cross Section.	〃

Reference Books:- Quantum Mechanics by N. Zettili

Lecturer

HOD

Adarsh Mahila Mahavidyalaya, Bhiwani

Session 2025-26 (Even Semester)

Lesson Plan from 1st Jan. to 5th May. (UG & PG Classes)

Class with Sem M.Sc-Ist(2nd) Subject . Physics.... Lecturer Name Ms. Manika

Course objectives ... Learner will be able to understand the work of Indian Scientist

Week	Topics	Methodology
01 Jan - 3 Jan	Astronomy in Indus and vedic period, Post vedic Astronomy	Lecture Method
05 Jan to 10 Jan	Planetary kinematics the early traditions of Siddhanta.	Lecture Method
12 Jan to 17 Jan	Basic Introduction of Astronomy Brief idea of yaga system of India and phases of moon.	Lecture Method
[illegible]	Rising and setting of stars and settings of stars and planets Indian calendey.	Lecture Method
27 Jan to 31 Jan	Pancanga, nakstra, festival dates in Indian calendey	Lecture Method
02 Feb to 07 Feb	Revision of previous class and test of unit 1.	Lecture Method
09 Feb to 14 Feb	Introduced of Astronomical Instruments and Samrat Yantra	Lecture Method
[illegible]	Disha Yantra, Cakra Yantra, Jai Prakash Yantra, Phalaka Yantra.	Lecture Method

Week	Topics	Methodology
23 Feb to 28 Feb	Kapala Yantra, Nalaka Yantra, Dhanuryantra, Chatl-Yantra Gola Yantra	Lecture Method
01 Mar to 08 Mar	**Holi Break**	
09 Mar to 14 Mar	Kattavi Yantra, Pitha Yantra, and Chatra Yantra, Development of Astronomical Laboratries	Lecture Method
16 Mar to 21 Mar	Delhi observatory and Jaipur observatory	Lecture Method
30 Mar to 04 April	**House Test**	
06 April to 11 April	Life and work of Indian Scientist Sir Jagadish chandra Bose, P.C. Ray	Lecture Method
13 April to 18 April	Srinvasa Ramanujan, Sir C.V. Raman, Meghanad Sah	Lecture method
20 April to 25 April	Role of Satyendra Nath Bose, S.S. Bhatnagar	Lecture method
27 April to 02 May	Homi Jehangir Bhabha and Vikram Sarabhai Role	Lecture Method
04 May to 09	development of CSIR, ISRO and DAE	Lecture Method

Reference Books: History of Astronomy in India by S.N. Sen, K.S. Shukla

Lecturer Amita

HOD

Adarsh Mahila Mahavidyalaya, Bhiwani

Session 2025-26 (Even Semester)

Lesson Plan from 1st Jan. to 5th May. (UG & PG Classes)

Class with Sem M.Sc. 2nd (4th) Subject Atomic & Molecular Lecturer Name Ms. Monika

Course objectives . Students will be able to understand Molecular spectroscopy.

Week	Topics	Methodology
01 Jan - 3 Jan	The origin of x-ray, x-ray emission spectra, dependence of position of emission lines on the atomic number	Lecture Method
05 Jan to 10 Jan	Numerical on the previous topic, x-ray emission doublet spectra, Revision of previous class with numerical Satellites with example.	Lecture Method
12 Jan to 17 Jan	Continuous x-ray Emission, x-ray absorption spectra, Introduction of Raman effect	Lecture Method
[illegible]	Quantum theory, molecular polarizability, pure rotational spectra of diatomic molecules with numerical	Lecture Method
27 Jan to 31 Jan	Vibrational Rotational Raman spectrum of diatomic molecules, Intensity alteration in Raman spectra	Lecture Method
02 Feb to 07 Feb	Graphical picture of Intensity alteration, application of Raman spectroscopy in the structure det.	Lecture Method
[illegible]	Definition and Examples of diatomic molecules, Relate Raman effect with diatomic molecules	Lecture Method
	Revision and numerical practice of question related on Raman effect Introduction of NMR spectroscopy	Lecture Method

Week	Topics	Methodology
23 Feb to 28 Feb	NMR Basic Peinciples, spin-spin and spin lattice relaxation times, chemical shift, spin spin coupling	Lecture Method
01 Mar to 08 Mar	Holi Break	
09 Mar to 14 Mar	Revision of Unit-3, Application of NMR spectroscopy, Introduction of Massbauer spectrometer, Isomer nuclear traition, resonance fluorescence	Lecture Method
16 Mar to 21 Mar	Numerical approach to the purvious topic, Massbauer effect, Massbauer nuclei, Isomer shift	Lecture Method
30 Mar to 04 April	House Test	
06 April to 11 April	quadrupole spliting, magnetic hyperfine structure application of Massbauer spectroscopy	Lecture Method
13 April to 18 April	Introduction of ESR spectroscopy, substance with which we studied ESR, Resonance condition	Lecture Method
20 April to 25 April	Relaxation machanism, nature of ESR spectroscopy @ g factor (b) fine structure (c) Hyperfine Structure (d) Lingand hyperfine structure, Application of ESR spectroscopy, Introduction of laser	Lecture Method
27 April to 02 May	Einstein coefficient and property of laser	Lecture Method.

Text Book: Atomic & Laser Physics by R. Rajkumar, Molecular spectroscopy by G. Aruldas.

Lecturer: Mrika

Incharge

Adarsh Mahila Mahavidyalaya, Bhiwani

Session 2025-26 (Even Semester)

Lesson Plan from 1st Jan. to 5th May. (UG & PG Classes)

Class with Sem M.Sc-I (sem-2nd) Subject Solid state Physics Lecturer Name Ms. Monika

Course objectives .. learner will be able to understand crystal structure and properties of solids.

Week	Topics	Methodology
01 Jan - 3 Jan	Recapitulation of basic concepts, Bravais lattice and Primitive vectors; primitive conventional unit cell	Lecture Method
05 Jan to 10 Jan	Crystal structure of Diamond cubic ZnS and NaCl, Packing fractional of SC, bcc, fcc, hcp and Diamond str.	Lecture Method
12 Jan to 17 Jan	Symmetry operation, determination of crystal str. by X-ray diffraction	Lecture Method
[illegible]	Reciprocal lattice, and Brillouin zones, Brag and Laue formation Ewald str. Structure factor	Lecture Method
27 Jan to 31 Jan	atomic structure factor of bcc and fcc lattices. Example of NaCl & diamond	Lecture Method
02 Feb to 07 Feb	cohesive energy in solids, covalent bonds, Hydrogen bonds, Inter molecular bonds, dipole-dipole bond	Lecture Method
09 Feb to 14 Feb	classical theory of lattice vibration, vibrations of crystal with monoatomic basis.	Lecture Method
[illegible]	Dispersion relation, First-Brillouin zone, Group velocity, phonon, phonon momentum, heat capacity	Lecture Method

Week	Topics	Methodology
23 Feb to 28 Feb	Density of states in one and three dimension, Models of Debye and Einstein, Debye T^3 law.	Lecture Method
01 Mar to 08 Mar	Holi Break	
09 Mar to 14 Mar	Sommerfeld free e⁻ gas model, Density of states, Fermi sphere, Fermi and ground state energy	Lecture Method
16 Mar to 21 Mar	Heat capacitcity of electronic gas, Thermal effective mass conductivity and Ohm's Law	Lecture Method
30 Mar to 04 April	House Test	Test Method
06 April to 11 April	Hall effect, Bloch theorem, Band theory, Kroning Penny model	Lecture
13 April to 18 April	Superconductivity and its role Meissner effect Type I and type II superconductors	Lecture Method
20 April to 25 April	Entropy, free energy, Heat capacity Energy gap, Microwave and infrared properties Isotope effect	Lecture Method
27 April to 02 May	London equation, London penetration depth, Coherence length, BCS theory, critical temperature.	Lecture Method
04 May to 09 May	Energy gap, critical field pseudo potential methods	Lecture Method

Reference Books: Introduction to Solid state Physics by Charles Kittel

Lecturer: Mehko

HOD

Adarsh Mahila Mahavidyalaya, Bhiwani

Session 2025-26 (Even Semester)

Lesson Plan from 1st Jan. to 5th May. (UG & PG Classes)

Class with Sem M.A. I, II Sem Subject International relations: A Historical Perspective Lecturer Name Nitya

Course objectives .....

a) To examine key issues in IR such as war, Peace, security, diplomacy
To understand major global challanges including Terrorism, Human Rights climate change, Nuclear Treaties etc.

Week	Topics	Methodology
01 Jan - 3 Jan	Introduction of the whole syllabus with students. Discuss it's relevance in modern Era.	Lecture
05 Jan to 10 Jan	Discuss the meaning of National Power it's nature and significance. Discuss different Types of Power	"
12 Jan to 17 Jan	diff. between Hard & Soft Power elements of Power. Discuss the importance of international law	"
19 Jan to 24 Jan	Discuss international morality and collective security. Revision of Unit I class Test of Unit I	"
27 Jan to 31 Jan	Discuss the cold war origin different Phases of Cold war Detente Period. Second phase of cold war, End of cold war	"
02 Feb to 07 Feb	Causes & Consequences of Cold war discussion Discuss importance & relevance of Non-Alignment Movement	"
09 Feb to 14 Feb	Discuss the Era of Post cold war Emerging world order, Post-corona world order and Indian Perespective	"
16 Feb to 21 Feb	Revision of Unit - II Viva of Both Unit Class Test of Unit I & II	"

Week	Topics	Methodology
23 Feb to 28 Feb	Discuss the Role & Relevance of organisation in International Relations.	Lecture
01 Mar to 08 Mar	**Holi Break**	
09 Mar to 14 Mar	Discuss the Emergence of Un it's Aims, objectives, structure & Evoluation of the work of UN.	"
16 Mar to 21 Mar	Peace & Development peresepektive Humanitarian intervention and the International Criminal Court	"
30 Mar to 04 April	**House Test**	
06 April to 11 April	Discuss International organisations EU, ASEAN, SAARC, BRICS Revision of Unit III. class Test of Unit III	"
13 April to 18 April.	Discuss the different Emerging issues in this changing woorld..	"
20 April to 25 April	Discuss Nuclear Politics, Treaties Arms Race, Arms Control and Disarmament.	"
27 April to 02 May	Disuss climate change, International Terrorism, Traditional & Non-Traditional Aspects of Security	"
04 May to 05 May	Doubt class / Revision class Class Test.	"

Reference Books:- Global Politics by Andrew Heywood

Lecturer

HOD

Adarsh Mahila Mahavidyalaya, Bhiwani

Session 2025-26 (Even Semester)

Lesson Plan from 1st Jan. to 5th May. (UG & PG Classes)

Class with Sem M.A.I (IIsem) Subject Parties, Elections & Political Process in Lecturer Name Dr. Mamta Wadhwa.

Course objectives * ~~Understand the~~ different India.
typologies, role and working of Political Parties
* understand the origin and development of Regional Parties
voting behaviour & election reforms in India.

Week	Topics	Methodology
01 Jan - 3 Jan	Discuss the syllabus with students.	Lecture Method
05 Jan to 10 Jan	Explain the Meaning and Role of Political Parties.	"
12 Jan to 17 Jan	Explain historical and sociological typology of Political Parties.	"
19 Jan to 24 Jan	Explain Political and Economical typology of Political - Parties.	"
27 Jan to 31 Jan	Explain the different types of Parties in India.	"
02 Feb to 07 Feb	Explain the Single party to Dominant and Multi-Party System	"
09 Feb to 14 Feb	Explain The Role, Identity of Regional Parties.	"
16 Feb to 21 Feb	Explain the whole topic of State Parties.	"

Week	Topics	Methodology
23 Feb to 28 Feb	Take the class-test of unit I. Discuss the problems of students regarding unit I & II	Lecture Method
01 Mar to 08 Mar	**Holi Break**	
09 Mar to 14 Mar	Explain the changing profile of National political Parties.	
16 Mar to 21 Mar	Explain, Ideology, Leadership and Social Base.	
30 Mar to 04 April	**House Test**	
06 April to 11 April	Explain Electoral Performance and take the test of short questions of unit I and II.	
13 April to 18 April	Explain the whole Process of Electoral system of India.	
20 April to 25 April	Explain the voting Behaviour regarding caste, community, gender and class.	
27 April to 02 May	Explain Money Power, Reforms, Funding of elections.	
04 May to 05 May	Take VIVA test and remark the Assessment works of the students	

Reference Books:-

Lecturer

HOD Dr. Mamta Wadhwa

Adarsh Mahila Mahavidyalaya, Bhiwani

Session 2025-26 (Even Semester)

Lesson Plan from 1st Jan. to 5th May. (UG & PG Classes)

Class with Sem .M.A.I/IIIrd Subject Indian Constitution and Governance. Lecturer Name .Dr. Mamta wadhwa.

Course objectives ..... (VAC)

Week	Topics	Methodology
01 Jan - 3 Jan	Explain the syllabus among the students	Lecture Method
05 Jan to 10 Jan	Explain the Making of Constitution & It's History	"
12 Jan to 17 Jan	Explain the features of the Indian Constitution.	"
19 Jan to 24 Jan	Explain the 'Preambles' of Indian Constitution.	"
27 Jan to 31 Jan	Describe the critical view of 'Indian Preambles'	"
02 Feb to 07 Feb	Explain the Fundamental rights.	"
09 Feb to 14 Feb	Explain the previous topic and Take test of Indian Constitution.	"
16 Feb to 21 Feb	Explain the Directive Principles of state police.	"

Week	Topics	Methodology
23 Feb to 28 Feb	Explain Importance and Criticism of Directive Principal.	Lecture Method
01 Mar to 08 Mar	**Holi Break**	
09 Mar to 14 Mar	Describe the Good Governance. features, types and work.	"
16 Mar to 21 Mar	Class test of Preambles will be taken and clear the doubt of students.	"
30 Mar to 04 April	**House Test**	"
06 April to 11 April	Explain Lokpal & Lokayukta Its composition, functions and importance.	"
13 April to 18 April	Explain RTI	"
20 April to 25 April	Explain the Citizen Charter.	"
27 April to 02 May	Take the Assessment test of unit 3.	"
04 May to 05 May	Take viva test and Do the Assessment work	"

Reference Books:-

Lecturer

HOD

Dr Mamta Wadhwa.

Adarsh Mahila Mahavidyalaya, Bhiwani

Session 2025-26 (Even Semester)

Lesson Plan from 1st Jan. to 5th May. (UG & PG Classes)

Class with Sem M.A.I (IIIsem) Subject Public Administration - II Lecturer Name Dr. Mamta Wadhwa

Course objectives: Understand the concept and different types of Budget, Basic of Personal administration, Process of recruitment, training, and conduct of civil services.

Week	Topics	Methodology
01 Jan - 3 Jan	Discuss the syllabus with the students	Lecture Method
05 Jan to 10 Jan	Explain the Meaning, Natur & Scope of Public Administration.	"
12 Jan to 17 Jan	Explain Meaning and characteristics of Bureaucracy. Explain the Process of recruitment of 'Civil services'	"
19 Jan to 24 Jan	Explain the Training, Promotion and Disciplinary Actions of 'Civil Services' among the students	"
27 Jan to 31 Jan	Explain the whole concept of Integrity & Netrality of Civil servics.	"
02 Feb to 07 Feb	Explain the Meaning, Defination, qualities of Good Budgeting.	"
09 Feb to 14 Feb	Explain the different types of budgets and differences among the different budgets	"
16 Feb to 21 Feb	Explain Financial Accounting & Auditing prcess.	"

Week	Topics	Methodology
23 Feb to 28 Feb	Class Test of Public Administration will be taken & Take the doubt of students regarding unit 1.	Lecture Method.
01 Mar to 08 Mar	**Holi Break**	
09 Mar to 14 Mar	Describe Delegated Legislation, Administrative & Adjudication and Administrative Tribunals.	11
16 Mar to 21 Mar	Continue the Previous topic and class test of Unit 2 will be taken.	11
30 Mar to 04 April	**House Test**	
06 April to 11 April	Describe Administrative Culture and Impact of Technology & Market on Administration.	11
13 April to 18 April	Explain Administrative Reforms with special Reference to India. Take doubt of Students.	11
20 April to 25 April	Explain Meaning, Types and Significance of Public Policy	11
27 April to 02 May	Explain different models and Role of Public Policy in Nation building.	11
04 May to 05 May	Take Viva test for Assignment work.	11

Reference Books:-

Lecturer

HOD

Adarsh Mahila Mahavidyalaya, Bhiwani

Session 2025-26 (Even Semester)

Lesson Plan from 1st Jan. to 5th May. (UG & PG Classes)

Class with Sem M.Sc.I(IInd) Subject Complex Analysis Lecturer Name ..Dr. Dipti

Course objectives ...The...main.. goal of this paper is to prepare students to understand the ~~structure~~ of complex variable, analytic function, residues and Evaluation of Integrals

Week	Topics	Methodology
01 Jan - 3 Jan	Introduction of Unit-1 function of a complex variable, Continuity, Cauchy. Differentiability, Analytic functions and their properties. Cauchy Riemann eqn in Cartesian and polar Coordinates	Chalk & Board
05 Jan to 10 Jan	Power Series, Radius of convergence, Differentiability of sum function of a power Series	"
12 Jan to 17 Jan	Branches of many valued functions with special reference to $\arg z$, $\log z$ and z^a. Unit-1 Complete	"
19 Jan to 24 Jan	Introduction of Unit-2. Path in a region, Contour, Complex integration, Cauchy theorem, Cauchy Integral formula, Extension of Cauchy integral formula for multiple connected contours	"
27 Jan to 31 Jan	Poisson Integral formula, Higher order derivatives, Complex Integrals as a function of its upper limit, Morera's th^n, Cauchy Inequality, Liouville's th^n, Taylor's th^n.	"
02 Feb to 07 Feb	Unit-2 Complete. Introduction of Unit-3. Definition of Zeros of an analytic function, Laurent Series, Isolated Singularities,	"
09 Feb to 14 Feb	Casorati-Weierstrass theorem, Limit point of Zeros and poles. Maximum Modulus principle, Schwarz Lemma,	"
16 Feb to 21 Feb	Definition of Meromorphic functions, Argument principle, Rouche's th^n, Fundamental theorem of algebra.	"

Week	Topics	Methodology
23 Feb to 28 Feb	Inverse function Th^{n}. Doubts of Unit-3. Test of Unit-3	Chalk and Board
01 Mar to 08 Mar	**Holi Break**	
09 Mar to 14 Mar	Introduction of Unit-4. Definition of Calculus of residues, Cauchy residue th^{n} & Taking Doubts.	Chalk & Board
16 Mar to 21 Mar	Evaluation of integrals of the types $\int_0^{2\pi} f(\cos t, \sin t)\,dt$, $\int_{-\infty}^{\infty} f(x)\,dx$, $\int_0^{\infty} f(x)\sin mx\,dx$ and $\int_0^{\infty} f(x)\cos mx\,dx$.	Chalk & Board
30 Mar to 04 April	**House Test**	
06 April to 11 April	Conformal mapping. Space of analytic functions and their completeness. Taking Doubts.	Chalk & Board
13 April to 18 April	Hurwitz th^{n}, Montel th^{n}, Riemann mapping theorem.	Chalk & Board
20 April to 25 April	Taking doubts of Unit-4. Test of Unit-4	〃
27 April to 02 May	Taking Viva of Unit-1	〃
04 May to 05 May	Taking Doubts	〃

Reference Books:- J. B. Conway, Springer-Verlag, Ruel V. Churchill.

Dipti
Lecturer

Dipti
HOD

Adarsh Mahila Mahavidyalaya, Bhiwani

Session 2025-26 (Even Semester)

Lesson Plan from 1st Jan. to 5th May. (UG & PG Classes)

Class with Sem M.Sc. I (Sem II) Subject Integral Equations Lecturer Name ... Dr. Dipti

Course objectives ... The main Goal of this paper is to prepare students to understand Integrals Eqn, its types, Laplace transform & Fourier transform.

Week	Topics	Methodology
01 Jan - 3 Jan	Introduction of the subject and Syllabus discussion. Integral Eqn & types of Integral Equations.	Chalk & Board
05 Jan to 10 Jan	Linear Integral Equations, Some basic Identities, Initial Value Problems reduced to Volterra Integral Equations. Examples of Integral Eqns	"
12 Jan to 17 Jan	Method of Successive Substitution and Successive approximation to Solve Volterra Integral Eqn of Second kind.	"
19 Jan to 24 Jan	Iterated Kernels and Neumann Series for Volterra Eqn's. Resolvent Kernel as a Series. and its Examples	"
27 Jan to 31 Jan	Unit-I Complete. Start Unit-2 Introduction of Boundary Value problems reduced to Fredholm Integral Eqn's. Method of Successive Substitution.	"
02 Feb to 07 Feb	Method of Successive approximation to Solve Fredholm Integral Eq's of second kind, Iterated Kernels and Neumann Series for Fredholm Eq's. Resolvent Kernel as a Sum of Series.	"
09 Feb to 14 Feb	Fredholm Resolvent Kernel as a ratio of two Series, Fredholm Eqn with Separable Kernels and its examples.	"
16 Feb to 21 Feb	Approximation of a Kernel by a Separable Kernel and its examples, Fredholm Alternative. Problems of Examples	"

Week	Topics	Methodology
23 Feb to 28 Feb	Non-Homogeneous Fredholm Integral Eqⁿs with degenerate kernels. Complete UNIT-2. Start UNIT-3 Introduction of Green function.	Chalkand Board
01 Mar to 08 Mar	**Holi Break**	
09 Mar to 14 Mar	Use of Method of variation of Parameters to construct the Green function for a non-homogeneous linear second order linear boundary value problems.	Chalkand Board
16 Mar to 21 Mar	Basic four Properties of the Green function, Alternate Procedure for construction of the Green function by using its basic four Properties	"
30 Mar to 04 April	**House Test**	
06 April to 11 April	Reduction of a boundary value problem to a Fredholm Integral Eqⁿ with kernel as Green function Hilbert-Schmidt theory of Symmetric kernels.	Chalk & Board
13 April to 18 April	Complete UNIT-3. Start UNIT-4 Integral transform for Solving Integral Eqⁿ's. Basic Properties of Laplace transform.	"
20 April to 25 April	Solution of Abel's eqⁿ with Laplace transform. Application of Laplace transform to the Solⁿ of Volterra Integral Eqⁿ with convolution type kernels. Test of UNIT-3	"
27 April to 02 May	Solⁿ of Integro-diffⁿ Eqⁿ using Laplace transform Fourier transform Fourier Sine and Cosine transform.	"
04 May to 05 May	Taking Doubts. Test of UNIT-4 Taking Viva & Assignment	"

Reference Books:- M.D Raisinghania, Pundhir.

Lecturer

HOD

Adarsh Mahila Mahavidyalaya, Bhiwani

Session 2025-26 (Even Semester)

Lesson Plan from 1st Jan. to 5th May. (UG & PG Classes)

Class with Sem M.Sc. I (IInd) Subject Complex Analysis Lecturer Name ..Dr. Dipti.

Course objectives ...The...main.. goal of this paper is to prepare Students to understand the structure of complex variable, analytic function, residues and Evaluation of Integrals

Week	Topics	Methodology
01 Jan - 3 Jan	Introduction of Unit-1 function of a Complex variable, Continuity, Cauchy. Differentiability, Analytic functions and their properties. Cauchy Riemann eqn in Cartesian and polar Coordinates	Chalk & Board
05 Jan to 10 Jan	Power Series, Radius of convergence, Differentiability of sum function of a power Series	"
12 Jan to 17 Jan	Branches of many valued functions with special reference to $\arg z$, $\log z$ and z^a. Unit-1 Complete.	"
19 Jan to 24 Jan	Introduction of Unit-2. Path in a region, Contour, Complex integration, Cauchy theorem, Cauchy Integral formula, Extension of Cauchy integral formula for multiple connected contour	"
27 Jan to 31 Jan	Poisson Integral formula, Higher order derivatives, Complex Integrals as a function of its upper limit, Morera's th, Cauchy Inequality, Liouville's th, Taylor's th.	"
02 Feb to 07 Feb	Unit-2 Complete. Introduction of Unit-3. Definition of Zeros of an analytic function, Laurent Series, Isolated Singularities,	"
09 Feb to 14 Feb	Casorati-Weierstrass theorem, Limit point of Zeros and poles. Maximum Modulus principle, Schwarz Lemma &	"
16 Feb to 21 Feb	Definition of Meromorphic functions, Argument principle, Rouche's th, Fundamental theorem of algebra.	"

Week	Topics	Methodology
23 Feb to 28 Feb	Inverse function Th^{n}. Doubts of Unit-3. Test of Unit-3	Chalk and Board
01 Mar to 08 Mar	**Holi Break**	
09 Mar to 14 Mar	Introduction of Unit-4. Definition of Calculus of residues, Cauchy residue th^{n}. Taking Doubts.	Chalk & Board
16 Mar to 21 Mar	Evaluation of integrals of the types $\int_0^{2\pi} f(\cos t, \sin t)\,dt$, $\int_{-\infty}^{\infty} f(x)\,dx$, $\int_0^{\infty} f(x)\sin mx\,dx$ and $\int_0^{\infty} f(x)\cos mx\,dx$.	Chalk & Board
30 Mar to 04 April	**House Test**	
06 April to 11 April	Conformal mappings. Space of analytic functions and their Completeness. Taking Doubts.	Chalk & Board
13 April to 18 April	Hurwitz th^{n}, Montel th^{n}, Riemann mapping theorem.	Chalk & Board
20 April to 25 April	Taking doubts of Unit-4. Test of Unit-4	〃
27 April to 02 May	Taking viva of Unit-1	〃
04 May to 05 May	Taking Doubts	〃

Reference Books:- J. B. Conway, Springer-Verlag, Ruel V. Churchill.

Dipti
Lecturer

Dipti
HOD

Adarsh Mahila Mahavidyalaya, Bhiwani

Session 2025-26 (Even Semester)

Lesson Plan from 1st Jan. to 5th May. (UG & PG Classes)

Class with Sem M.Sc.I (Sem II) Subject Integral Equations Lecturer Name ...Dr. Dipti

Course objectives ...The main Goal of this paper is to prepare students to understand Integrals Eqn, its types, Laplace transform & Fourier transform

Week	Topics	Methodology
01 Jan - 3 Jan	Introduction of the subject and Syllabus discussion. Integral Eqn & types of Integral Equations.	Chalk & Board
05 Jan to 10 Jan	Linear Integral Equations, Some basic Identities, Initial Value Problems reduced to Volterra Integral Equations. Examples of Integral Eqns	"
12 Jan to 17 Jan	Method of Successive Substitution and Successive approximation to Solve Volterra Integral Eqn of Second Kind.	"
19 Jan to 24 Jan	Iterated Kernels and Neumann Series for Volterra Eqns. Resolvent Kernel as a Series. and its Examples	"
27 Jan to 31 Jan	Unit-1 Complete. Start Unit-2 Introduction of Boundary Value Problems reduced to Fredholm Integral Eqns. Method of Successive Substitution	"
02 Feb to 07 Feb	Method of Successive approximation to Solve Fredholm Integral Eq's of second Kind, Iterated Kernels and Neumann Series for Fredholm Eq's, Resolvent Kernel as a Series and its Examples	"
09 Feb to 14 Feb	Fredholm Resolvent Kernel as a ratio of two Series, Fredholm Eqn with Separable Kernels and its examples.	"
16 Feb to 21 Feb	Approximation of a Kernel by a Separable Kernel and its examples, Fredholm Alternative Problems of Examples	"

Week	Topics	Methodology
23 Feb to 28 Feb	Non-Homogeneous Fredholm Integral Eq^{n}s with degenerate kernels. Complete Unit-2. Start Unit-3 Introduction of Green function.	Chalkand Board
01 Mar to 08 Mar	**Holi Break**	
09 Mar to 14 Mar	Use of Method of variation of Parameters to construct the Green function for a non-homogeneous linear second order linear boundary value problems.	Chalkand Board
16 Mar to 21 Mar	Basic four Properties of the Green function, Alternate Procedure for construction of the Green function by using its basic four Properties	"
30 Mar to 04 April	**House Test**	
06 April to 11 April	Reduction of a boundary value problem to a Fredholm Integral Eq^{n} with Kernel as Green function Hilbert-Schmidt theory of Symmetric kernels.	Chalk & Board
13 April to 18 April	Complete Unit-3. Start Unit-4 Integral transform for Solving Integral Eq^{n}'s. Basic Properties of Laplace transform.	"
20 April to 25 April	Solution of Abel's eq^{n} with Laplace transform. Application of Laplace transform to the Sol^{n} of Volterra Integral Eq^{n} with convolution type kernel.	"
27 April to 02 May	Test of Unit-3 Sol^{n} of Integro-diff^{n} Eq^{n} using Laplace transform Fourier transform, Fourier Sine and Cosine transforms.	"
04 May to 05 May	Taking Doubts. Test of Unit-4 Taking Viva & Assignment	"

Reference Books:- R.P. Kanwal, Pandit.

Dipti
Lecturer

Dipti
HOD

Adarsh Mahila Mahavidyalaya, Bhiwani

Session 2025-26 (Even Semester)

Lesson Plan from 1st Jan. to 5th May. (UG & PG Classes)

Class with Sem M.Sc.I (IInd.).. Subject Linear Algebra Lecturer Name Mr. ANJU RANI

Course objectives .. Students obtained the knowledge about vector spaces and existence theorem for basis of a finitely generated vector space; concept of homomorphism, isomorphism and dual spaces.

Week	Topics	Methodology
01 Jan - 3 Jan	UNIT - I Vector space, subspaces, Sum and direct sum of subspaces Linear span, Linearly Independent	Chalk & Board
05 Jan to 10 Jan	and dependent subsets of a vector space, Finitely generated vector space, Existence theorem	Chalk & Board
12 Jan to 17 Jan	for basis of a finitely generated vector space, Finite dimensional vector spaces	Chalk & Board
19 Jan to 24 Jan	Revise - related theorems and examples & Test	Chalk & Board
27 Jan to 31 Jan	UNIT-2 Invariance of the number of elements of bases sets, Dimensions	Chalk & Board
02 Feb to 07 Feb	Quotient space and its dimension, Homomorphism and isomorphism of vector	Chalk & Board
09 Feb to 14 Feb	UNIT-III spaces. Linear transformations and linear forms on vector spaces, vector space of	Chalk & Board
16 Feb to 21 Feb	all the linear transformations and related theorem & examples & Test	Chalk & Board

Week	Topics	Methodology
23 Feb to 28 Feb	Taking doubts and Test UNIT-III Dual Spaces, Bidual Spaces, Annihilator of subspaces	Chalk & Board
01 Mar to 08 Mar	**Holi Break**	
09 Mar to 14 Mar	UNIT-III of finite dimensional vector spaces. Null spaces, Range space of a linear transformation, Rank and Nullity theorem. & Test	Chalk & Board
16 Mar to 21 Mar		Chalk & Board
30 Mar to 04 April	**House Test**	
06 April to 11 April	UNIT-IV Algebra of linear transformation, Minimal polynomial of a linear transformation	Chalk & Board
13 April to 18 April	Singular and non Singular linear transformations. Matrix of a linear transformation. Change of basic, Eigen Values and eigen vectors of linear transformation & Revise & Test	Chalk & Board
20 April to 25 April		Chalk & Board
27 April to 02 May	Revise UNIT-I & II Discuss related Problems & Test	"
04 May to 05 May	Revise - UNIT - III & IV Discuss related Problems & Test	"

Reference Books:- I. N. Herstein Topics in Algebra
P. B. Bhattacharya, S.K. Jain and S.R. Nagpal, Basic Abstract Algebra

Anju Rani
Lecturer

Dipti
HOD

Adarsh Mahila Mahavidyalaya, Bhiwani

Session 2025-26 (Even Semester)

Lesson Plan from 1st Jan. to 5th May. (UG & PG Classes)

Class with Sem . M.Sc. II Subject . Functional Analysis Lecturer Name . Dr. ANJU RANI

Course objectives . this paper is aimed to introduce several normed spaces, product spaces. Explain spectral theory. Also learner will be familiar with the natural embedding concepts and understand how it works in conjugate spaces

Week	Topics	Methodology
01 Jan - 3 Jan	Base & Revise the topics of Under graduation which is related to P.G. Syllabus.	Chalk & Board
05 Jan to 10 Jan	UNIT-I Normed spaces, Banach spaces, Finite dimensional normed space and Subspaces,	Chalk & Board
12 Jan to 17 Jan	Linear operators, Bounded and continuous linear operators, Linear Functionals, Normed	Chalk & Board
19 Jan to 24 Jan	spaces of operators, Dual spaces, revise all topics discuss any problems.	Chalk & Board
27 Jan to 31 Jan	taking related problems and revise UNIT-I & Test	Chalk & Board
02 Feb to 07 Feb	UNIT-II Inner Product space and its properties, Hilbert Space Orthogonal Complements and	Chalk & Board
09 Feb to 14 Feb	direct sums, Legendre, Hermite and Laguerre poly-nomials.	Chalk & Board
16 Feb to 21 Feb	Related theorems and examples, taking problems	Chalk & Board

Week	Topics	Methodology
23 Feb to 28 Feb	Representation of functionals on Hilbert spaces, Hilbert Adjoint operator, Unitary & Normal operators	Chalk & Board
01 Mar to 08 Mar	**Holi Break**	
09 Mar to 14 Mar	UNIT-III Hahn Banach theorem Uniform bounded principle, closed graph theorem,	Chalk & Board
16 Mar to 21 Mar	Open mapping theorem, Adjoint operators, Reflexivity and all related topics	Chalk & Board
30 Mar to 04 April	**House Test**	
06 April to 11 April	UNIT-IV Spectral theory in finite dimensional normed spaces, Spectral properties of Bounded	Chalk & Board
13 April to 18 April	Linear operators, Further Properties of Resolvent and spectrum, Spectral properties of Bounded	Chalk & Board
20 April to 25 April	Self-Adjoint Linear Operators Positive operators & Related theorems and Examples.	Chalk & Board
27 April to 02 May	Revise UNIT-I, II Discussion on problems & Test	"
04 May to 05 May	Revise UNIT-III & IV Discussion on problems & Test	"

Reference Books:-

Arti Rani
Lecturer

Dipti
HOD

Adarsh Mahila Mahavidyalaya, Bhiwani

Session 2025-26 (Even Semester)

Lesson Plan from 1st Jan. to 5th May. (UG & PG Classes)

Class with Sem M.Sc-II (Sem-IV) Subject Mechanics of Solids-II Lecturer Name Dr. Mohini & Dr. Dipti

Course objectives This paper is aimed to derive the basic concept of generalized plane stress and plain strain. learn the concept of torsion of beams and variational method. Illustrate concept of visco-elasticity. Introduce concept of waves and velocity of elastic wave.

Week	Topics	Methodology
01 Jan - 3 Jan	Introduction to the topics in the syllabus. Two Dimensional Problems Discussion.	Chalk and Board
05 Jan to 10 Jan	Plain Strain and Plain Stress. Generalized plain Stress. Problem Discussion. Airy Stress function, Numerical Problems for plain strain problems	Chalk and Board
12 Jan to 17 Jan	General Solution of Biharmonic equation. Stresses and displacements in terms of complex potentials	Chalk and Board
19 Jan to 24 Jan	Thick walled tube under external & internal pressures, Rotating shaft Numerical Problems, Problem Discussion	Chalk and Board
27 Jan to 31 Jan	Torsion of Beams: Torsion of cylindrical Bars. Torsional rigidity. Torsion and Stress function. Lines of shearing stress	Chalk and Board
02 Feb to 07 Feb	Simple problems related to circle, ellipse and equilateral triangle cross section. Doubt Discussion, Test.	Chalk and Board
09 Feb to 14 Feb	Circular groove in a circular shaft's Numerical problems. Variational Analysis: Reciprocal Theorem of Betti and Rayleigh.	Chalk and Board
16 Feb to 21 Feb	Deflection of elastic string by Transverse load; Deflection of central line of Beam Deflection of elastic Membrane.	Chalk and Board

Week	Topics	Methodology
23 Feb to 28 Feb	Doubt Discussion, Reflection of elastic membrane. The Ritz method - one and two dimensional, The Galerkin method	Chalk and Board
01 Mar to 08 Mar	**Holi Break**	
09 Mar to 14 Mar	Test of Unit - 1. The method of Kantorovitch. Viscoelasticity: Spring & Dashpot Problem Discussion	Chalk and Board
16 Mar to 21 Mar	Maxwell and Kelvin Models, Three parameter solid, Correspondence principle & its application to the deformation of a viscoelastic.	Chalk and Board
30 Mar to 04 April	**House Test**	
06 April to 11 April	Thick - walled tube in Plain strain. Problem discussion of Unit - 2, 3	Chalk and Board
13 April to 18 April	Waves: Simple Harmonic progressive waves, scalar wave eqn, Examples related to article.	Chalk and Board
20 April to 25 April	Progressive type solutions, Plane waves and spherical waves, Stationary type solution of Cartesian & Cylindrical coordinates.	Chalk and Board
27 April to 02 May	Elastic waves: Propagation of waves in an unbounded isotropic elastic solid, P, SV and SH waves. Problem Discussion	Chalk and Board
04 May to 05 May	Surface waves: frequency eqn for Rayleigh and Love waves.	Chalk and Board

Reference Books:- 1. A.K. Mal and S.J. Singh, Deformation of elastic solids, New Jersey
2. Waves by C.A. Coulson and A. Jeffrey

Lecturer

HOD

Adarsh Mahila Mahavidyalaya, Bhiwani

Session 2025-26 (Even Semester)

Lesson Plan from 1st Jan. to 5th May. (UG & PG Classes)

Class with Sem M.Sc(P).(Sem-2) Subject Partial Differential Eqn and Fourier Analysis Lecturer Name Dr. Mohini

Course objectives The aim of this paper is to study the theory of partial Differential equations and solution methods. Illustration of wave eqn, heat eqn and Laplace learner will be able to solve PDEs using method of separation of variables, Fourier transform, Numerical and approximate methods etc.

Week	Topics	Methodology
01 Jan - 3 Jan	Introduction to the topics and syllabus Linear Partial Differential of second and higher orders. Some examples.	Chalk and Board
05 Jan to 10 Jan	Linear and non-linear Homogeneous and Non-Homogeneous eqn with constant coefficients, Partial Diff. equation with variable co-efficient reducible to eqn with constant coefficient	Chalk and Board
12 Jan to 17 Jan	Complementary function and particular integrals, Equation reducible to linear equation with constant coefficients Examples.	Chalk and Board
19 Jan to 24 Jan	Examples related to above topics and Exercise questions of all syllabus of unit-1, Doubt Discussion	Chalk and Board
27 Jan to 31 Jan	Classification of linear partial Differential equation of second order, Hyperbolic, Parabolic and Elliptic types, Examples	Chalk and Board
02 Feb to 07 Feb	Reduction of second order partial Diff. eqn to canonical (normal) forms and their solutions.	Chalk and Board
09 Feb to 14 Feb	Solution of linear hyperbolic eqn. Monge's method for partial differential equation of second order. Problem Discussion	Chalk and Board
16 Feb to 21 Feb	Cauchy's problem for second order P.D.E. Characteristics eqn and characteristic curves of second order differential eqn Problems, examples	Chalk and Board

Week	Topics	Methodology
23 Feb to 28 Feb	Method of Separation of variables, laplace eqn, wave equation (one or two Dimensional), Problem Discussion	Chalk and Board
01 Mar to 08 Mar.	**Holi Break**	
09 Mar to 14 Mar	Diffusion (Heat) eqn (one and two D.) in cartesian co-ordinate system, Example Doubt discussion, Test	Chalk and Board
16 Mar to 21 Mar	Reduction of second order partial Diff Equation to canonical (Normal form) all examples and exercise questions.	Chalk and Board
30 Mar to 04 April	**House Test**	
06 April to 11 April	Fourier Analysis: Fourier series - arbitrary period, even and odd function, Examples (all), Exercise questions.	Chalk and Board
13 April to 18 April	Half Range Expansion, Examples, forced oscillations, Fourier integral.	Chalk and Board
20 April to 25 April	Fourier line integral, fourier cosine integral, Fourier transform, Examples and exercise Questions.	Chalk and Board
27 April to 02 May	Fourier Transforms, Solution of PDE using Fourier transforms, Convolution Theorems, Inverse function Theorems Test.	Chalk and Board
04 May to 05 May	Discussion of whole syllabus queries. Presentations of students.	Chalk and Board

Reference Books:- 1. D A Murray: Introductory course on Diff. Eqn
2. J.N Sharma & Kehar Singh: Partial Diff eqn.

Mohinder
Lecturer

HOD

Adarsh Mahila Mahavidyalaya, Bhiwani

Session 2025-26 (Even Semester)

Lesson Plan from 1st Jan. to 5th May. (UG & PG Classes)

Class with Sem M.Sc.-II (Sem-IV) Subject Mathematical Aspects of Seismology Lecturer Name Dr. Mohini

Course objectives .....

The main goal of this paper is to prepare students to understand the structure of earth waves which passes through it. The topics are partially relevant to student that continues with research within seismology

Week	Topics	Methodology
01 Jan - 3 Jan	Introduction of the subject and syllabus discussion. Waves: General form of Progressive waves.	Chalk and Board
05 Jan to 10 Jan	Harmonic waves and examples, Wave equations (derivations), Principle of superposition, Plane-waves	Chalk and Board
12 Jan to 17 Jan	Plane waves and solution of 1-D wave equation, Solution of 2D wave equation D'Alembert solution, Solution of 3D wave equation.	Chalk and Board
19 Jan to 24 Jan	Solution of 3D wave equation and examples Example of stationary type wave eqn. Last Discussion	Chalk and Board
27 Jan to 31 Jan	3D Wave equation in Spherical co-ordinates (formation and solution) Test of articles.	Chalk and Board
02 Feb to 07 Feb	Dispersion, Group velocity, Equation of Telegraphy, solution and Theorems	Chalk and Board
09 Feb to 14 Feb	Inhomogeneous wave eqn, Dependence of solution on the cauchy data, Theorems Problem Discussion of Unit-I, Test.	Chalk and Board
16 Feb to 21 Feb	P and S waves (SV + SH waves) Equation Plane waves in two Dimensional and Shells law of Reflection, Refraction of P waves from free surface of half space	Chalk and Board

Week	Topics	Methodology
23 Feb to 28 Feb	Reflection of SV waves from a free surface of an elastic solid half space, Boundary condⁿ of reflection of waves, Problem Discussion	Chalk + Board
01 Mar to 08 Mar	**Holi Break**	
09 Mar to 14 Mar	Reflection and Refraction of SH wave at plane interface, Reflection and Refraction at Liquid - Liquid & solid - Liquid interface with examples.	Chalk and Board
16 Mar to 21 Mar	Partition of Reflected energy, Surface waves: Rayleigh waves, Stonly waves, Love waves, Problem Discussion.	Chalk and Board
30 Mar to 04 April	House Test	
06 April to 11 April	Stress - Strain Relation with examples Lambs Problem (2D), Discussion of Problem No - 1, 2, 3, 4, 5, 6.	Chalk and Board
[illegible]	Line source, Area source in Elastic medium, Problems of Semi - Elastic medium (line and area) as well. Problem Discussion.	Chalk and Board
20 April to 25 April	Lamb's Problem in 3D and Problem No - 7 & 8, Volume source Problem on the surface of semi infinite solid, Problem Discussion.	Chalk and Board
27 April to 02 May	Spherical waves, Sommerfeld Integral (cases), Kirchoff's solution of wave Eqⁿ Presentation of Unit I, II.	Chalk and Board
04 May to 09 May	Poission formula, Doubt Discussion of Whole Syllabus.	Chalk and Board

Reference Books:

1. Introduction to Seismology by P.M Shearer
2. Introduction to Theory of Seismology by K.E. Bullen
3. Waves by C.A Coulson and A. Jeffrey

Mohini
Signature

HOD

Adarsh Mahila Mahavidyalaya, Bhiwani

Session 2025-26 (Even Semester)

Lesson Plan from 1st Jan. to 5th May. (UG & PG Classes)

Class with Sem M.Sc. I Sem II Subject Mathematics in India: From vedic Period to Modern Times Lecturer Name Shaly Yadav & Dr. Dipti

Course objectives: The aim of this paper is to study the mathematics in Ancient period, Medieval period and Modern period.

Week	Topics	Methodology
01 Jan - 3 Jan	Introduction to the topics and syllabus Ancient period.	Chalk and Board
05 Jan to 10 Jan	Development of Indian mathematics during vedic and Ancient period. Overview of the vedic period, Mathematical ideas in the vedas.	Chalk and Board
12 Jan to 17 Jan	Life, background, notable works, mathematical contribution of Baudhayana, Pingala, Aryabhata, Brahmagupta, Bhaskaracharya and Lilavati.	chalk and Board
19 Jan to 24 Jan	Revision of Ancient Period and doubt discussion.	Chalk and Board
27 Jan to 31 Jan	Introduction about Medieval period.	Chalk and Board
02 Feb to 07 Feb	Medieval period: Kerala School of Mathematics, Madhava of sangamgrama.	Chalk and Board
09 Feb to 14 Feb	Medieval period: Nilakantha somayaji, Jyesthadeva: Overview of historical backgrounds & their condition.	Chalk and Board
16 Feb to 21 Feb	Revision of whole medieval period and doubt discussion.	Chalk and Board

Week	Topics	Methodology
23 Feb to 28 Feb	Introduction of Modern period and problem discussion of Ancient and medieval period.	Chalk and Board
01 Mar to 08 Mar	**Holi Break**	
09 Mar to 14 Mar	Modern period: Srinivasa Ramanujan, Satyendra Nath Bose, Radhanath Sikdar.	chalk and Board
16 Mar to 21 Mar	P. C. Mahalanobis, D. R. Kaprekar: Early life, Education, Challenges, Achievements & their contribution.	Chalk and Board
30 Mar to 04 April	**House Test**	
06 April to 11 April	Medals and Prizes in Mathematics & contemporary Mathematics: Introduction to the prestigious Fields Medal, Abel Prize and their significance.	Chalk and Board
13 April to 18 April	Biography and contributions of illustrious mathematicians from India: Subrahmanyan Chandrasekhar, C. R. Rao.	chalk and Board
20 April to 25 April	Srinivas Varadhan, Manjul Bhargava, Akshay Venkatesh, Harish Chandra and Shakuntala Devi.	Chalk and Board
27 April to 02 May	Discussion of whole syllabus.	Chalk and Board
04 May to 05 May	Doubt class	Chalk and Board

Reference Books:- C. N. Srinivasiengar, History of Mathematics in India
T. A. Saraswati Amma, Geometry in Ancient & Medieval India.

Lecturer

HOD

Adarsh Mahila Mahavidyalaya, Bhiwani

Session 2025-26 (Even Semester)

Lesson Plan from 1st Jan. to 5th May. (UG & PG Classes)

Class with Sem M.Sc.I (Math) Subject Operation Research Lecturer Name Shalu Yadav

Course objectives The aim of this paper is to study the operation Research Techniques linear programming, Transportation problems, Assignment problems, Queuing methods and Inventory control models.

Week	Topics	Methodology
01 Jan - 3 Jan	Introduction to the topics and syallabus of operation Research Techniques:	Chalk and Board
05 Jan to 10 Jan	Operation Research- Origin, defination and its scope. Introduction of linear programming.	Chalk and Board
12 Jan to 17 Jan	Linear programming: formulation and solution of linear programming problems by Graphical & simplex methods with examples.	Chalk and Board
19 Jan to 24 Jan	Linear Programming: Big-M and Two phase methods, Degeneracy, Duality in linear programming.	Chalk and Board
27 Jan to 31 Jan	Revision and discussion of Unit - I.	Chalk and Board
02 Feb to 07 Feb	Transportation Problems: Basic feasible solutions, optimum solution by stepping stone and modified methods	Chalk and Board
09 Feb to 14 Feb	Unbalanced and degenerate problems, trans- shipment problem.	Chalk and Board
16 Feb to 21 Feb	Assignment problems: Solution by Hungarian method, unbalanced problem, case of maximization, travelling salesman & crew assignment problems.	Chalk and Board

Week	Topics	Methodology
23 Feb to 28 Feb	Revision and doubt discussion of unit-II	chalk and Board
01 Mar to 08 Mar	**Holi Break**	
09 Mar to 14 Mar	Queuing Methods: Basic components of a queuing system, General birth-death equations.	Chalk and Board
16 Mar to 21 Mar	Steady-state solution of Markovian queuing models with single and multiple servers.	chalk and Board
30 Mar to 04 April	**House Test**	
06 April to 11 April	Revision and doubt discussion of unit III.	Chalk and Board
13 April to 18 April	Inventory control models: Economic order quantity model with uniform demand and with different rates of demands in different cycle.	Chalk and Board
20 April to 25 April	EOQ when shortages are allowed, EOQ with uniform replenishment, Inventory control with price breaks.	Chalk and Board
27 April to 02 May	Revision and doubt discussion of unit-IV.	Chalk and Board
04 May to 05 May	Doubt class	Chalk and Board

Reference Books:- H.A. Taha, Operation Research- An Introduction
N.S. Kambo, Mathematical Programming Techniques.

Lecturer

HOD

Adarsh Mahila Mahavidyalaya, Bhiwani

Session 2025-26 (Even Semester)

Lesson Plan from 1st Jan. to 5th May. (UG & PG Classes)

Class with Sem M.Sc.I (Sem II) Subject Real Analysis-II Lecturer Name Shalu Yadav

Course objectives The aim of this paper is to study the Riemann-stieltjes integral, Integration and differentiation, Rectifiable curves, Improper integrals, Abel's and Dirichlet's tests, Frullani's integral, metric spaces, Cauchy sequences, Baire's category theorem, Continuous functions, Bolzano-Weierstrass property.

Week	Topics	Methodology
01 Jan - 3 Jan	Introduction to the topics and syllabus of Real-Analysis-II	Chalk and Board
05 Jan to 10 Jan	Riemann-stieltjes integral, Existence and properties with examples.	Chalk and Board
12 Jan to 17 Jan	Integration & differentiation, Condition of integrability, Integration of vector-valued functions.	Chalk and Board
19 Jan to 24 Jan	Fundamental theorem of calculus, Relation between Riemann Integral and Riemann-stieltjes integral.	Chalk and Board
27 Jan to 31 Jan	Rectifiable curves. Revision and doubt discussion of unit-I.	Chalk and Board
02 Feb to 07 Feb	Improper integrals and their convergence, comparison tests, Abel's and Dirichlet's tests.	Chalk and Board
09 Feb to 14 Feb	Frullani's integral, integral as a function of a parameter Continuity, Differentiability of an integral of a function of a parameter.	Chalk and Board
16 Feb to 21 Feb	Revision and doubt discussion of unit-II.	Chalk and Board

Week	Topics	Methodology
23 Feb to 28 Feb	Defination and examples of metric spaces, neighbourhoods, limit points, interior points.	Chalk and Board
01 Mar to 08 Mar	**Holi Break**	
09 Mar to 14 Mar	Open and closed sets, closure and interior, boundary points, subspaces of a metric space, equivalent metrics.	Chalk and Board
16 Mar to 21 Mar	Cauchy sequences, completeness, Cantor's intersection theorem, Baire's category theorem, contraction Pinciple	Chalk and Board
30 Mar to 04 April	**House Test**	
06 April to 11 April	Revision and doubt discussion of unit - II	Chalk and Board
13 April to 18 April	Continuous functions, uniform continuity, compactness for metric spaces, sequential compactness.	Chalk and Board
20 April to 25 April	Bolzano - weierstrass property, total boundedness, finite intersection property, continuity in relation with compactness, connectedness, components.	Chalk and Board
27 April to 02 May	Continuity in relation with Connectedness.	Chalk and Board
04 May to 05 May	Revision and doubt discussion.	Chalk and Board

Reference Books:- Rom B., Metric spaces
Simmons G.F., Introduction to Topology and Modern Analysis

Lecturer

HOD

Adarsh Mahila Mahavidyalaya, Bhiwani

Session 2025-26 (Even Semester)

Lesson Plan from 1st Jan. to 5th May. (UG & PG Classes)

Class with Sem M.Sc. II (Sem IV) Subject Mathematical Modeling Lecturer Name Shelly Yadav

Course objectives The aim of this paper is to study the mathematical model techniques, ordinary differential eqn in first order, qualitative solutions through sketching, through system of ordinary differential equations, Higher order models, simple models, mass-balance equations, probability generating functions, initial & boundary conditions

Week	Topics	Methodology
01 Jan - 3 Jan	Introduction to the topics and syllabus of Mathematical Modeling.	Chalk and Board
05 Jan to 10 Jan	The process of applied Mathematics; mathematical modeling: need, techniques.	Chalk and Board
12 Jan to 17 Jan	Mathematical modeling: classification and illustrative, mathematical modeling through ordinary differential eqn.	Chalk and Board
19 Jan to 24 Jan	Qualitative solutions through sketching with examples.	Chalk and Board
27 Jan to 31 Jan	Revision and doubt disscussion of unit-I.	Chalk and Board
02 Feb to 07 Feb	Mathematical modeling in population dynamics, epidemic and compartment models.	Chalk and Board
09 Feb to 14 Feb	Mathematical modeling through systems of ordinary differential equations.	Chalk and Board
16 Feb to 21 Feb	Mathematical modeling in economics, medicine, arms race, battle.	Chalk and Board

Week	Topics	Methodology
23 Feb to 28 Feb	Revision and doubt discussion of unit-II	Chalk and Board
01 Mar to 08 Mar	**Holi Break**	
09 Mar to 14 Mar	Mathematical modeling through ordinary differential equations of second order. Higher order models	Chalk and Board
16 Mar to 21 Mar	Mathematical modeling through difference equations: Need, basic theory, mathematical modeling in probability theory.	Chalk and Board
30 Mar to 04 April	**House Test**	
06 April to 11 April	Mathematical modeling in economics, finance, population dynamics and genetics. Revision and doubt discussion.	Chalk and Board
13 April to 18 April	Mathematical modeling through partial differential equations: simple models.	Chalk and Board
20 April to 25 April	Mass-balance equations, variational principles, probability generating function.	Chalk and Board
27 April to 02 May	Traffic flow problems, initial and boundary conditions.	Chalk and Board
04 May to 05 May	Revision and doubt discussion of whole syllabus.	Chalk and Board

Reference Books:- Mathematical Modelling — J.N. KAPOOR

Lecturer

HOD

Adarsh Mahila Mahavidyalaya, Bhiwani

Session 2025-26 (Even Semester)

Lesson Plan from 1st Jan. to 5th May. (UG & PG Classes)

Class with Sem/Part 2, 2nd Sem Subject History Lecturer Name Babita Choudhary

Course objectives ..... The main objective of this course to provide the basic knowledge to the student regarding education and development of education system of India from ancient ~~time~~ times to modern age.

Week	Topics	Methodology
01 Jan - 3 Jan	• Discuss the vision and objectives of the vedic education system. • Salient features of the vedic education.	Lecture method
05 Jan to 10 Jan	• Teaching and learning process during vedic period. • Understanding Guru Shishya Parampara. • Buddhist education system.	"
12 Jan to 17 Jan	Nalanda, Taxila.	"
19 Jan to 24 Jan	Vikramshila, Valabhi	"
27 Jan to 31 Jan	Revision for all Topic Class test.	"
02 Feb to 07 Feb	Brief Historical development and Salient features of education in Muslim era.	"
09 Feb to 14 Feb	Educational system in India : Home education, Pathshalas, Gurukuls.	"
16 Feb to 21 Feb	Temples and Mathas, Maktab and Madrasas etc.	"

Week	Topics	Methodology
Feb	Critical Examination of Lord Macaulay Minutes.	//
01 Mar to 08 Mar	**Holi Break**	//
09 Mar to 14 Mar	• Colonization of education in India. Swadeshi and Nationalist. • Educational Reforms and Contribution of Indian Thinkers.	//
16 Mar to 21 Mar	• Savitribai and Jyotiba Phule, Swami Vivekananda. • Pt. Madan Mohan Malaviya, Sir Syed Ahmad Khan, Rabindranath Tagore, Mahatma Gandhi.	//
30 Mar to 04 April	**House Test**	//
06 April to 11 April	• Sri Aurobindo, Dr. Bhim Rao Ambedkar, Jiddu Krishnamurti, Revision of all Topic.	//
13 April to 18 April	Introduction of education Commissions, Committees and Policies with specific reference to Kothari Commission.	//
20 April to 25 April	National Policy on Education 1968 and Plan of Action.	//
27 April to 02 May	Education Policy 1986 and Plan of Action. Nep 2020 Redefining vision for education in India	//
04 May to 05 May	Revision for all Syllabus and Class Viva.	//

Reference Books:- • P N Seth - Successful tourism management.
• A K Bhatia International Tourism. Management & Tourism development Principles and practices.

Lecturer

HOD

Adarsh Mahila Mahavidyalaya, Bhiwani

Session 2025-26 (Even Semester)

Lesson Plan from 1st Jan. to 5th May. (UG & PG Classes)

Class with Sem M.A.(Hist.)-II Subject Ancient India An overview Lecturer Name Archana Maurya

Course objectives ..The..course..objective is to provide basic knowledge of Ancient Indian History from stone Age to Gupta Period.

Week	Topics	Methodology
01 Jan - 3 Jan	Discuss of syllabus features of Palaeolithic and Neolithic Age.	Lecture method
05 Jan to 10 Jan	Introduction of Indus Valley civilization. Age, founder, origine and main sites.	''
12 Jan to 17 Jan	Explain the Urban Planning and features of Indus Valley civilization.	''
[illegible]	Discuss of features of Vedic Age. polity, society and Economy. Class test- Unit-I	''
27 Jan to 31 Jan	Discuss of Emergence of the state systems sixteen mahajanapadas.	''
02 Feb to 07 Feb	To Explain society condition Buddhism and Jainism Time Period.	''
09 Feb to 14 Feb	Introduction of Buddhism and Jainism.	''
16 Feb to 21 Feb	Economy condition as urbanization Trade craft and Agriculture system. Class test - Unit II	''

Week	Topics	Methodology
23 Feb to 28 Feb	To Explain maurya dynasty Rulers and Administration of Ashoka Dhamm.	"
01 Mar to 08 Mar	**Holi Break**	
09 Mar to 14 Mar	Discuss of post maurya polities as Kushans and satavahanas.	"
16 Mar to 21 Mar	To Explain polity of sangam Chiefdoms. Revision	"
30 Mar to 04 April	**House Test**	
06 April to 11 April	Discuss of Economy condition of the Indo-Roman Trade system. Class-test Unit-III	"
13 April to 18 April	To Explain political Development of Guptas.	"
20 April to 25 April	Political development of Pushyabhutis and Pallavas.	"
27 April to 02 May	Revision whole syllabus	"
04 May to 05 May	Class-test Unit-IV Problem solving session viva	"

Reference Books:- Early medieval Indian Society – R S Sharma
A study in feudalization.

Archana Nayak
Lecturer

A Peoples History of India

HOD

Revolution.

Adarsh Mahila Mahavidyalaya, Bhiwani

Session 2025-26 (Even Semester)

Lesson Plan from 1st Jan. to 5th May. (UG & PG Classes)

Class with Sem M.A I SEM-II Subject Medieval India: An overview Lecturer Name Aridam Maurya

Course objectives The course objective is knowing the knowledge of medieval Indian History from Ilbaris, Tughluq to mughal.

Week	Topics	Methodology
01 Jan - 3 Jan	Discuss of syllabus political consolidation under the Ilbaris and Khalji Dynasty.	Lecture method
05 Jan to 10 Jan	Analyze the nobility system During the Delhi sultanate and its impact.	''
12 Jan to 17 Jan	To Explain of political consolidation under Iltutmish and policies of Balban	''
19 Jan to 24 Jan	Introduction of Alauddin Khalji Market Regulation and agrarian Reform in the 13th century.	''
27 Jan to 31 Jan	Class-test Unit-I Discuss of muhammad bin tughluq Political and Religious orientation.	''
02 Feb to 07 Feb	To Explain implemation and consequences of Tughaluq.	''
09 Feb to 14 Feb	To Explain Administrative Reform and impact of Firuz Shah Tughluq.	''
16 Feb to 21 Feb	Discuss of Nobility under The Tughluq and Afghan concept of monarchy. Class-test-unit-II	''

Week	Topics	Methodology
23 Feb to 28 Feb	Discuss of Abul Fazl's concept of monarchy in the mughal state. Akabar Expriment with Din-I-Ilahi its Historical critique.	"
01 Mar to 08 Mar	**Holi Break**	
09 Mar to 14 Mar	To Explain fuctioning of the mansab system under the mughal.	"
16 Mar to 21 Mar	Discuss the duvalopment of the Land Revenue System during Akabar's Reign. class-test unit - III	"
30 Mar to 04 April	**House Test**	
06 April to 11 April	To Explain the concept of the mughal Empire expansion and its crisis.	"
13 April to 18 April	Discuss the mughal expansion in the Deccan. and populer uprising in Northern India during Aurangzeb Rule.	"
20 April to 25 April	Discuss of Aurangzeb conflicts with mewar and marwar. and military conflict with the marathas.	"
27 April to 02 May	Class - test - unit - IV Revision	"
04 May to 05 May	Revision whole syllabus. Problem salving session viva	"

Reference Books:- Essay on Medieval Indian History - Satish chandra

Some Aspects of muslim Administration - R.P. Tripathi

Archanamaurya
Lecturer

HOD

Adarsh Mahila Mahavidyalaya, Bhiwani

Session 2025-26 (Even Semester)

Lesson Plan from 1st Jan. to 5th May. (UG & PG Classes)

Class with Sem B.A. Th. 2nd Sem Subject Modern India Lecturer Name Dr. Ruchi Vats

Course objectives: This paper is a study of British colonialism in which India can be studied as a classic case of British Imperialism An overview

Week	Topics	Methodology
01 Jan - 3 Jan	Introduce about the syllabus of Modern India. Causes of decline of Mughal empire.	Lecture Method.
05 Jan to 10 Jan	Rise of British Power Political Condition of Mughals. Economic Condition of Mughals in 18th Century	
12 Jan to 17 Jan	Third Anglo Maratha War Causes, events and Result Second Anglo Maratha war Causes, events and result.	
19 Jan to 24 Jan	Third Anglo - Maratha war Causes, events and Results. First Anglo-sikh war, Causes, events and Result	
27 Jan to 31 Jan	Complete the concept of Anglo-sikh war. Mysore war and its impact Class Test.	
02 Feb to 07 Feb	Expansion of East India Company. British administrative and economic policy in early years. British Expansion	
09 Feb to 14 Feb	military campaigns and annexations by British. Economic policies - Land Revenue systems and trade	
16 Feb to 21 Feb	Social and Cultural impact of British rule. Class test.	

Week	Topics	Methodology
Feb	Introduction of Peasant Revolts like as Decan, Indigo and Pabna.	Lecture Method.
01 Mar to 08 Mar	**Holi Break**	
09 Mar to 14 Mar	Tribal Revolts - Bhil, Kol, Santhal Gond and others. 1857 revolt and causes, nature and main Leaders	
16 Mar to 21 Mar	Result of Independence war. Causes of Indian national movement. Test of long answer type question.	
30 Mar to 04 April	**House Test**	
06 April to 11	Mahatma Gandhi and his struggle for freedom. Non-Cooperation Movement and Civil disobedient Movement.	
13 April to 18 April	Quit India movement. Nehru and his role of Indian freedom. Moderate's principal.	
20 April to 25 April	Introduction of Extremist, Principal and Contribution. Revolutionary 's cause of rise and Principals.	
27 April to 02 May	Partition of India. Causes and Impacts of Partition.	
04 May to 05 May	Problem - Solving Session. Viva.	

Reference Books:- Bipan Chandra, The rise and Growth of Economic National ism in India.
ii) Sumit Sarkar, Modern India.

Lecturer
↓
DR. Ruchi Vats.

HOD

Adarsh Mahila Mahavidyalaya, Bhiwani

Session 2025-26 (Even Semester)

Lesson Plan from 1st Jan. to 5th May. (UG & PG Classes)

Class with Sem B.A.I, 2nd Sem. Subject History of Haryana Lecturer Name Dr. Ruchi Vats

Course objectives : Understand the regional history (1526-1947) is explored through study of Haryana from Mughal to Modern Age.

Week	Topics	Methodology
01 Jan - 3 Jan	Introduction about the wholesyllabus First panipat war, Causes, event and impacts. Second panipat war. Causes, event, Impacts.	Lecture Method.
05 Jan to 10 Jan	Hemu's life and his achievements Repeated second war of Panipat. Revolt of Satnami against Mughal empire.	
13 Jan to 17 Jan	Mughal Administration Economy Land Revenue system. Type of land revenue, official involved	
19 Jan to 24 Jan	Irrigation system of Mughal period. Short Answer type question of Unit one.	
27 Jan to 31 Jan	Political - Religious development-:. Marathas Incusion, George Thomas and his achievementsin Haryana.	
02 Feb to 07 Feb	Sikh Intrusion. Rise and fall of Banda Bahadur. Arya samaj and development in Haryana.	
09 Feb to 14 Feb	Development of Education and Literature in Haryana. Concept of revolt of 1857.	
16 Feb to 21 Feb	Causes, event and effects of revolt of 1857. Nature of revolt Rise of Nationalism in Haryana. Class Test.	

Week	Topics	Methodology
Feb	Political Condition during the period of 1885 to 1919. Causes of Political Consciousness.	Lecture Method
01 Mar to 08 Mar	**Holi Break**	
09 Mar to 14 Mar	Presentation on the result of 1857. Concept of Unionist party and role of Sir Chhotu Ram in freedom movement.	
16 Mar to 21 Mar	Gandhian Movement. Introduction of Mahatma Gandhi and his freedom Struggle.	
30 Mar to 04 April	**House Test**	
06 April to 11 April	Non - Cooperation movement: Causes, Programme, Progress and Impacts. Causes of civil disobedience.	
13 April to 18 April	Programme, Progress and Impacts of Civil disobedience movement. Short answer type questions of unit 2.	
20 April to 25 April	Revise the short answer type questions of unit 3. and any other questions also.	
27 April to 02 May	Quit India Movement causes, Progress and impacts. Praja Mandal Movement.	
04 May to 05 May	Problem Solving Session. Viva.	

Reference Books:- Buddha Prakash, Glimpses of Haryana.

S.C. Mittal Haryana: Historical Perspective.

HOD

Lecturer

Dr. Ruchi Vats.

Adarsh Mahila Mahavidyalaya, Bhiwani

Session 2025-26 (Even Semester)

Lesson Plan from 1st Jan. to 5th May. (UG & PG Classes)

Class with Sem PG...2nd Sem Subject Environmental History Lecturer Name Dr. Ruchi Vats

Course objectives Provide the basic knowledge of Environment and development of Ecological system.

Week	Topics	Methodology
01 Jan - 3 Jan	Introduction of the syllabus of Enviourmental History. What is ecology and its Concept.	Lecture Method.
05 Jan to 10 Jan	Type and scope of Ecology. Nature of Ecology : its science or art and its relationship.	
	Ecology and its relation to other subjects. Terminology of Ecology.	
19 Jan to 24 Jan	Different approaches to Ecology. short answer type question of Unit One.	
27 Jan to 31 Jan	Class Test of unit one. Introduction of Environment and its Component.	
02 Feb to 07 Feb	Management of Conservation of living and Non-living components. Resources of Environment for sustainable development.	
09 Feb to 14 Feb	define the resources of environment for sustainable development. Concept of degradation of Environment.	
16 Feb to 21 Feb	Environment degradation and its impact on present and future generations. Class Test.	

Week	Topics	Methodology
Feb	Short answer type questions of unit two presentation on evaluate and Analyze the environment.	Lecture method.
01 Mar to 08 Mar	**Holi Break**	
09 Mar to 14 Mar	Environment and ecological Consciousness in Ancient India. Indus Valley civilization and its planned organization. Drainage system.	"
16 Mar to 21 Mar	watershed Management and waste management relate with Indus civilization. Worship of different components of Nature.	
30 Mar to 04 April	**House Test**	
06 April to 11	Early Vedic and Later Vedic ~~nature~~, forest and life management in Arthasastra of Kautilya.	
13 April to 18 April	Environment and ecological Consciousness in medieval and British India. Revise previous questions	
20 April to 25 April	Exploitation of Natural resources for economic development in medieval India. Short Answer type questions.	
27 April to 02 May	British Economic policy to extend imperialism. Ruins of Indian small scale Industry, over Exploitation of Natural Resources.	
04 May to 05 May	Problem solving Session. Viva.	

Reference Books:- P. D. Sharma, Ecology and Environment.

H.C. Verma, Bharat mein Arthik rashtravada ka Udbhav or Vikas.

Bipin chandra, Nand Maurya Yugin Bharat.

Lecturer

Dr Ruchi Vats

HOD

Adarsh Mahila Mahavidyalaya, Bhiwani

Session 2025-26 (Even Semester)

Lesson Plan from 1st Jan. to 5th May. (UG & PG Classes)

Class with Sem MA Eco II Sem Subject Micro-Economic Analysis -II Lecturer Name Ms. Neerja Parmar

Course objectives .Understand new advances in the theory of firm and think critical Analyze economic problems in the context of firm. Apply Microeconomic tools to solve real life problems specially under uncertain ity and game theory.

Week	Topics	Methodology
01 Jan - 3 Jan	Average Cost Pricing model.	Chalk & Board
05 Jan to 10 Jan	Bain's Limit Pricing Theory, Baumol's Sales Maximization model (all four static models)	"
12 Jan to 17 Jan	Mann's Model of Managerial Enterprise, Williamson's Model of Managerial Discretion.	"
19 Jan to 24 Jan	Pricing of factors of production (modern approach under perfect and imperfect market)	"
27 Jan to 31 Jan	Elasticity of technical substitution and factor shares,	"
02 Feb to 07 Feb	Technical progress and factor shares, Ricardo theory of distribution	"
09 Feb to 14 Feb	Marx, Kalecki and Kaldor theory of distribution.	"
16 Feb to 21 Feb	The Walrasian approach to general equilibrium; Existence, Stability and uniqueness of the partial equilibrium.	"

Week	Topics	Methodology
23 Feb to 28 Feb	Pareto Optimality; Maximization of social welfare,	chalk and Board
01 Mar to 08 Mar	**Holi Break**	"
09 Mar to 14 Mar	Market failure: Externalities., Public goods and asymmetric information	"
16 Mar to 21 Mar	Moral Hazard and Adverse selection, The theory of second best, Economics of information - search costs, market signaling	"
30 Mar to 04 April	**House Test**	"
06 April to 11 April	Inter-temporal choice in consumption, Economics of Uncertainty: Risk and Uncertainity in Demand Choices	"
13 April to 18 April	Measuring Risk, Utility Theory and Risk Aversion, Gambling and Insurance Mean-variance analysis and portfolio selection	"
20 April to 25 April	Risk aversion and indifference curves reducing risk and uncertanity, Risk pooling and risk spreading	"
27 April to 02 May	Extensive forms and normal forms dominant strategies and elimination of dominant strategies	"
04 May to 05 May	Nash equilibrium, cooperative and non cooperative games, sequential and simultaneous games, applications with oligopoly markets - Cournot, Bertrand and Stackelberg.	"

Reference Books:- H. L. Ahuja, ~~Micro~~ Advance Microeconomics

Lecturer Anuja Parmar

HOD

Adarsh Mahila Mahavidyalaya, Bhiwani

Session 2025-26 (Even Semester)

Lesson Plan from 1st Jan. to 5th May. (UG & PG Classes)

Class with Sem IInd Sem M.A. Economics Subject Macro-Economic Analysis-II Lecturer Name Ms. Ravina Soni

Course objectives To provide students with a clear understanding of monetary theory, demand and supply of money, interest rate determination and other macroeconomic functions.

Week	Topics	Methodology
01 Jan - 3 Jan	Theory of Demand- classical Approach, fisher's equation, cambridge Quantity theory.	Chalk & Board
05 Jan to 10 Jan	Keynes Liquidity Approach- Transaction, Precautionary & Speculative Demand for money.	"
12 Jan to 17 Jan	Post Keynesian approach to demand for money - Tobin, Baumal's approach.	"
19 Jan to 24 Jan	Friedman, Patinkin's real Balance effect. Revision & Test of unit Ist.	"
27 Jan to 31 Jan	Measure of money supply and Monetary Aggregates, determinants of money supply.	"
02 Feb to 07 Feb	Money multiplier Approach, Behavioural model of money supply determination.	"
09 Feb to 14 Feb	Instruments of monetary control, Interest rates - Theories of determination.	"
16 Feb to 21 Feb	Theories of Term structure of Interest rates. Revision & Test of unit 2nd.	"

Week	Topics	Methodology
23 Feb to 28 Feb	Theory of Inflation, classical, Keynesian and Monetarist Approaches.	Chalk & Board
01 Mar to 08 Mar	**Holi Break**	〃
09 Mar to 14 Mar	structuralist theory of Inflation; Philips curve - short run and long run.	〃
16 Mar to 21 Mar	Natural rate of unemployment Hypothesis, Modified Philips curve Tobin, Samuelson - solow.	〃
30 Mar to 04 April	**House Test**	〃
06 April to 11 April	Business cycle theories of Kaldor, Samuelson, Hicks etc. Revision & Test of unit 3rd	〃
13 April to 18 April	Balance of Payment, Exchange rate Dornbush exchange rate Overshooting Model.	〃
20 April to 25 April	Mundell - fleming Model Under fixed and flexible Exchange rates.	〃
27 April to 02 May	Adaptive Expectation Hypothesis, Rational Expectation Hypothesis.	〃
04 May to 05 May	Policy meffectiveness, Lucas supply curve, Revision & Test of unit 4th.	〃

Reference Books:- Advanced Macroeconomics, worth Publishers.

Lecturer Ravina soni

HOD

Adarsh Mahila Mahavidyalaya, Bhiwani

Session 2025-26 (Even Semester)

Lesson Plan from 1st Jan. to 5th May. (UG & PG Classes)

Class with Sem M.A Economics 2nd sem Subject Economics of Growth & Development-II Lecturer Name Dr. Renu

Course objectives- To familiarize students with key theories, issues, and models of economic growth and development for analyzing development challenges and strategies.

Week	Topics	Methodology
01 Jan - 3 Jan	Role of Education, Knowledge and governance in economic development.	Chalk & Board
05 Jan to 10 Jan	Trade & Development, Trade as engine of growth, Perbish Singer and Myrdal views.	"
12 Jan to 17 Jan	Gain from trade & less developed countries.	"
19 Jan to 24 Jan	Role of FDI and MNCs in Economic development. Revision & Test of Ist unit.	"
27 Jan to 31 Jan	Concept and measures of Poverty, Head count ratio, Income gap ratio, Sen's poverty Index.	"
02 Feb to 07 Feb	concept and measurement of Inequality, Lorenz curve and Gini's coefficient	"
09 Feb to 14 Feb	Growth and new Industrial policy, Privatization & disinvestment Labour market reforms	"
16 Feb to 21 Feb	State and state failures, Issues of good governance Revision & Test of 2nd unit.	"

Week	Topics	Methodology
23 Feb to 28 Feb	Economic development and Environmental degradation	Chalk & Board
01 Mar to 08 Mar	**Holi Break**	
09 Mar to 14 Mar	Environmental Kuznet's curve, preservation and irreversibility of Env. changes.	〃
16 Mar to 21 Mar	Krutilla-fisher equation, energy & development. Revision for House Test.	〃
30 Mar to 04 April	**House Test**	
06 April to 11 April	Solow model, Basic solow model, Technology and solow Model, Human capital.	〃
13 April to 18 April	Economics of ideas, economic growth, Romar model Endogenous growth models.	〃
20 April to 25 April	Mechanics of endogenous growth, the deeper economics of convergence, Population growth & Malthus	〃
27 April to 02 May	Lessons from Asian tigers, Natural resources as limits to growth	〃
04 May to 05 May	Neoclassical versus endogenous growth theory Revision & Test of unit 4.	〃

Reference Books:- Todaro, M.P and smith, S.C 'Economic Development' Latest edition, Pearson publication.

Lecturer

HOD

Adarsh Mahila Mahavidyalaya, Bhiwani

Session 2025-26 (Even Semester)

Lesson Plan from 1st Jan. to 5th May. (UG & PG Classes)

Class with Sem M.A. Eco 2nd Sem Subject Math..... Lecturer Name Ms. Neeru Parmar

Course objectives Perform matrix operations, solve simultaneous equations, and apply matrix algebra techniques to input-output analysis. Compute the consumers surplus and producers surplus by utilizing the tool of integral calculus and develop the ability to solve differential equations.

Week	Topics	Methodology
01 Jan - 3 Jan	Concept of Matrix and Determimant - their types.	Chalk and Board
05 Jan to 10 Jan	simple operations on matrices, Matrix inversion and rank of matrix.	"
12 Jan to 17 Jan	Solution of simultaneous equations through Cramer's rule and Matrix inverse method.	"
19 Jan to 24 Jan	Introduction to input-output analysis.	"
27 Jan to 31 Jan	Rules of differentiation, Elasticity and their types.	"
02 Feb to 07 Feb	Rules of Partial differentiation and interpretation of partial derivaties	"
09 Feb to 14 Feb	Problems of maxima and minima in single and multivariable functions	"
16 Feb to 21 Feb	Unconstrained and constrained Optimization in simple economic problems	"

Week	Topics	Methodology
23 Feb to 28 Feb	Concept and simple rules of Integration. Application to Consumer's surplus.	Chalk and Board
01 Mar to 08 Mar	**Holi Break**	
09 Mar to 14 Mar	Application to Producer's surplus Differential Equations: Solution of Homogeneous	"
16 Mar to 21 Mar	Exact linear differential equations of first and second order, application to demand.	"
30 Mar to 04 April	**House Test**	
06 April to 11 April	Application to revenue and market equilibrium models.	"
13 April to 18 April	Solution of first order and second order difference equations	"
20 April to 25 April	Applications in trade cycle models, Growth models and lagged market equilibrium models.	"
27 April to 02 May	Linear programming- Basic concept, Nature of feasible, basic and optimal solution.	"
04 May to 05 May	Solution of linear programming problem through graphical method.	"

Reference Books:- Mathematics for Economists by P.R. Jain

Veerja Parmar
Lecturer

HOD

Adarsh Mahila Mahavidyalaya, Bhiwani

Session 2025-26 (Even Semester)

Lesson Plan from 1st Jan. to 5th May. (UG & PG Classes)

Class with Sem 2nd Sem M.A. Eco Subject Indian Economic Thought-II Lecturer Name D.R. Renu. MS. Ravina Soni

Course objectives ..... To understand and evaluate the evolution and relevance of Indian Economic Thought.

Week	Topics	Methodology
01 Jan - 3 Jan	Introduction of Modern Thinkers and their thinkings.	Chalk & Board
05 Jan to 10 Jan	Dadabhai Naoroji: Analysis of the 'Drain Theory' and its Implecations on colonial Indian economy.	"
12 Jan to 17 Jan	R.C Dutt and Gopal Krishna Gokhale - critiques of British economic policies.	"
19 Jan to 24 Jan	R.C Dutt and Gopal Krishna Gokhale - advocacy for Indian self-governance.	"
27 Jan to 31 Jan	Mahatma Gandhi: Emphasis on self sufficiency.	"
02 Feb to 07 Feb	Mahatma Gandhi - village-centric economics, swadeshi movement.	"
09 Feb to 14 Feb	Khadhi and cottage Industries. Revision of Ist unit & Test.	"
16 Feb to 21 Feb	Introduction of modern Indian Economists and Planners.	"

Week	Topics	Methodology
23 Feb to 28 Feb	M.N Roy - Marxist perspectives and critiques of capitalist structures.	chalk & Board
01 Mar to 08 Mar	**Holi Break**	
09 Mar to 14 Mar	Dr. B.R. Ambedkar: Advocacy for social Justice.	"
16 Mar to 21 Mar	Dr. B.R Ambedkar - economic equity and labor rights.	"
30 Mar to 04 April	**House Test**	
06 April to 11 April	V.K.R.V Rao: contributions to economic planning.	"
13 April to 18 April	cooperative movements and development strategies:	"
20 April to 25 April	A.K Sen : capability Approach, functionings, capabilities and Agency.	"
27 April to 02 May	Abhjeet Banerjee : The Economics of Poverty, The poor as Rational Actors.	"
04 May to 05 May	Revision of all thinkers and test of unit. 2nd.	"

Reference Books:- Indian Economic Thought : A Nineteen Century perspective, T MH, Delhi.

HOD

Lecturer

Ravina Soni

Adarsh Mahila Mahavidyalaya, Bhiwani

Session 2025-26 (Even Semester)

Lesson Plan from 1st Jan. to 5th May. (UG & PG Classes)

Class with Sem M.A. Economics 2nd Sem Subject Constitutional, Human & Moral Values and IPR, Lecturer Name .Ms. Ravina Soni

Course objectives ..... To promote understanding of constitutional values, Human ethics, moral conduct, and basic awareness of Intellectual property rights.

Week	Topics	Methodology
01 Jan - 3 Jan	Constitutional values: Historical perspective of Indian Constitution.	Chalk & Board
05 Jan to 10 Jan	Basic values enshrined in the Indian constitution, concept of constitutional Morality.	"
12 Jan to 17 Jan	Patriotic values and Ingredients Nation Building	"
19 Jan to 24 Jan	Fundamental Rights and duties, Directive Principles of the state, Revision & Test of unit 1st.	"
27 Jan to 31 Jan	Humanistic values: Humanism, Human virtues and civic sense.	"
02 Feb to 07 Feb	Social Responsibilies of Human beings, Ethical ways to deal with Human aspirations.	"
09 Feb to 14 Feb	Idea of International Peace and Brotherhood (Vasudhaiv Kutumbkam)	"
16 Feb to 21 Feb	Harmony with society and nature Revision & Test of 2nd unit.	"

Week	Topics	Methodology
23 Feb to 28 Feb	Moral values and Professional conduct - understanding Morality and moral values.	Chalk & Board
01 Mar to 08 Mar	**Holi Break**	
09 Mar to 14 Mar	Moral education & character Building, Ethics of Relations; Personal, social & Professional.	"
16 Mar to 21 Mar	Introduction to gender Sensitization, Affirmative approach towards weaker sections.	"
30 Mar to 04 April	**House Test**	
06 April to 11 April	Intellectual property rights: Meaning, origins and nature of IPRs.	"
13 April to 18 April	Different kinds of IPRs - copyright Patent, Trademark.	"
20 April to 25 April	Trade secret / Dress, Design, Traditional Knowledge.	"
27 April to 02 May	Infringement and offences of IPRs - Remedies and Panalities.	"
04 May to 05 May	Basics of Plagiarism policy of UGC. Revision & Test of unit 4th	"

Reference Books:- Constitutional Human Moral Values, VK publication (Rajesh Garg, Sudesh Kumar, Anil Jindal)

Lecturer Rachna Soni

HOD