Lesson Plan

Name of the Assistant/ Associate Professor..... Samay Rawat (Paper. II)
Class and Section. ...B.Sc. 3rd year VIth semester.....
Subject: ...Physical chemistry theory + Practical

Week	Date	Topics
1	1-Jan-18	Introduction of Electronic Spectra
	2-Jan-18	Meaning and Concept of Potential energy
	3-Jan-18	Potential energy curve for Bonding M.O.
	4-Jan-18	Potential energy curve for A.B.M.O
	5-Jan-18	Qualitative discription of selection rule
	6-Jan-18	Practical to determine the strength of monobasic acid solution conductometrically
	7-Jan-18	Sunday
2	8-Jan-18	Franck- Condon Principle.
	9-Jan-18	Qualitative discriptional Sigma M.O.
	10-Jan-18	Q. discription of π and n- M.Oribtal
	11-Jan-18	Transfer of energy level and its transition
	12-Jan-18	Assignment of above
	13-Jan-18	Revised practical to determine the strength of monobasic acid solution conductometrically
	14-Jan-18	Sunday
3	15-Jan-18	Introduction of Photochemistry
	16-Jan-18	Interaction of radiation with Matter
	17-Jan-18	Define thermal and photochemical Process
	18-Jan-18	Difference blw thermal and photochemical Proc
	19-Jan-18	Laws of Photochemistry
	20-Jan-18	Practical to determine the strength of dibasic acid solution conductometrically
	21-Jan-18	Sunday
4	22-Jan-18	Vasant Panchami
	23-Jan-18	Grotthus - Drapper Law
	24-Jan-18	Sir Chhotu Ram Jayanti
	25-Jan-18	Stark- Einstein Law
	26-Jan-18	Republic Day
	27-Jan-18	Jablonski diagram of various process
	28-Jan-18	Sunday
5	29-Jan-18	J. diagram of various process occuring in excited state
	30-Jan-18	Qualitative discription of fluorescence
	31-Jan-18	Q. discription of Phosphorescence

Samay Rawat

Lesson Plan

Name of the Assistant/ Associate Professor..... Samay Rawat (Paper. II)
Class and Section. ...B.Sc. 3rd year ... VIth semester .....
Subject: ...Physical chemistry theory + Practical

Week	Date	Topics
1	1-Jan-18	Introduction of Electronic Spectra
	2-Jan-18	Meaning and concept of Potential energy
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	10-Jan-18	Q. discription of π and n- M.Oribtal
	11-Jan-18	Transfer of energy level and its transition
	12-Jan-18	Assignment of above
	13-Jan-18	Revised practical to determine the strength of monobasic acid solution conductometrically
	14-Jan-18	Sunday
3	15-Jan-18	Introduction of Photochemistry
	16-Jan-18	Interaction of radiation with Matter
	17-Jan-18	Define thermal and photochemical Process
	18-Jan-18	Difference blw thermal and photochemical Proce
	19-Jan-18	Laws of Photochemistry
	20-Jan-18	Practical to determine the strength of dibasic acid solution conductometrically
	21-Jan-18	Sunday
4	22-Jan-18	Vasant Panchami
	23-Jan-18	Grotthus - Drapper Law
	24-Jan-18	Sir Chhotu Ram Jayanti
	25-Jan-18	Stark - Einstein Law
	26-Jan-18	Republic Day
	27-Jan-18	Jablonski diagram of various process
	28-Jan-18	Sunday
5	29-Jan-18	J. diagram of various process occuring in excited state
	30-Jan-18	Qualitative discription of fluorescence
	31-Jan-18	Q. discription of Phosphorescence

Rawat

Lesson Plan

Name of the Assistant/ Associate Professor: Samay Rawat

Class and Section: B.Sc. 2nd year IV Sem. Paper-II

Subject: Physical Chemistry theory + Practical

Week	Date	Topics
1	1-Mar-18	Guru Ravidas Birthday
	2-Mar-18	Holi
	3-Mar-18	Practical to determine the strength of monobasic acid solution potentiometrically
	4-Mar-18	Sunday
2	5-Mar-18	Determination of Molecular weight from O. Presur
	6-Mar-18	Elevation of Boiling Point
	7-Mar-18	Depression of freezing Point.
	8-Mar-18	Thermodynamic derivation of relation b/w M & Bp
	9-Mar-18	T. derivation of elevation in B.P & Depression in F. Poin
	10-Mar-18	Practical to determine the acidic strength of dibasic acid potentiometrically.
	11-Mar-18	Sunday
3	12-Mar-18	Experimental method for colligative property
	13-Mar-18	Abnormal Mass
	14-Mar-18	Degree of dissociation
	15-Mar-18	Association of Solution
	16-Mar-18	Assignment of Elevation of Boiling Point.
	17-Mar-18	Revised practical to determine the acidic strength of dibasic solution potentiometrically
	18-Mar-18	Sunday
4	19-Mar-18	Introduction of Phase equilibrium.
	20-Mar-18	Statement and meaning of Phase Component.
	21-Mar-18	Statement and meaning of degree of freedom
	22-Mar-18	Assignment of Degree of Association & Dissociat
	23-Mar-18	Gibbs phase rule.
	24-Mar-18	Practical to determine the molecular weight of a non-volatile solute by Rast method
	25-Mar-18	Sunday/ Ram Navami
5	26-Mar-18	Thermodynamic derivation of Gibbs phase rule
	27-Mar-18	Phase equilibria of one Component System
	28-Mar-18	Example of one component system.
	29-Mar-18	Mahavir Jayanti
	30-Mar-18	Example in water and sulphur System
	31-Mar-18	Revised practical to determine the molecular weight of a non-volatile solute by rast method

Rawat

Lesson Plan

Name of the Assistant/ Associate Professor..... Samay Rawat (Paper. II)
Class and Section. ...B.Sc. 3rd year VIth semester.....
Subject: ...Physical chemistry theory + Practical

Week	Date	Topics
1	1-Jan-18	Introduction of Electronic Spectra
	2-Jan-18	Meaning and Concept of Potential energy
	3-Jan-18	Potential energy curve for Bonding M.O.
	4-Jan-18	Potential energy curve for A.B.M.O
	5-Jan-18	Qualitative discription of selection rule
	6-Jan-18	Practical to determine the strength of monobasic acid solution conductometrically
	7-Jan-18	Sunday
2	8-Jan-18	Franck- Condon Principle.
	9-Jan-18	Qualitative discriptional Sigma M.O.
	10-Jan-18	Q. discription of π and n- M.Oribtal
	11-Jan-18	Transfer of energy level and its transition
	12-Jan-18	Assignment of above
	13-Jan-18	Revised practical to determine the strength of monobasic acid solution conductometrically
	14-Jan-18	Sunday
3	15-Jan-18	Introduction of Photochemistry
	16-Jan-18	Interaction of radiation with Matter
	17-Jan-18	Define thermal and photochemical Process
	18-Jan-18	Difference blw thermal and photochemical Proc
	19-Jan-18	Laws of Photochemistry
	20-Jan-18	Practical to determine the strength of dibasic acid solution conductometrically
	21-Jan-18	Sunday
4	22-Jan-18	Vasant Panchami
	23-Jan-18	Grotthus - Drapper Law
	24-Jan-18	Sir Chhotu Ram Jayanti
	25-Jan-18	Stark- Einstein Law
	26-Jan-18	Republic Day
	27-Jan-18	Jablonski diagram of various process
	28-Jan-18	Sunday
5	29-Jan-18	J. diagram of various process occuring in excited state
	30-Jan-18	Qualitative discription of fluorescence
	31-Jan-18	Q. discription of Phosphorescence

Samay Rawat

Lesson Plan

Name of the Assistant/ Associate Professor..... Samay Rawat .....

Class and Section:... B.Sc. 3rd year VI Sem (Paper-II)

Subject:..... Physical chemistry theory + Practical

Week	Date	Topics
1	1-Apr-18	Sunday
	2-Apr-18	Introduction of equilibria
	3-Apr-18	Phase equilibria of two component System
	4-Apr-18	Example of two component system
	5-Apr-18	Solid- liquid equilibria
	6-Apr-18	Meaning of eutectic
	7-Apr-18	Practical to standardize the mono/dibasic acid solution pH metrically.
	8-Apr-18	Sunday
2	9-Apr-18	Simple eutectic
	10-Apr-18	Example of two component system
	11-Apr-18	Example of Pb- Ag system
	12-Apr-18	desilerisation :- Introduction
	13-Apr-18	Desilerisation of lead
	14-Apr-18	Dr Ambedkar Jayanti / Vaisakhi
	15-Apr-18	Sunday
3	16-Apr-18	Meaning of desilerisation
	17-Apr-18	Desilerisation with example.
	18-Apr-18	Parashurama Jayanti
	19-Apr-18	Assignment of Pb- Ag system.
	20-Apr-18	Revision Revision of Franks - Codon principle
	21-Apr-18	Revision Revision of Selection rules
	22-Apr-18	Sunday
4	23-Apr-18	Revision Revision of photochemistry
	24-Apr-18	Revision Revision of Ideal and non ideal solution
	25-Apr-18	Revision Revision of colligative properties
	26-Apr-18	Revision Revision of degree of freedom
	27-Apr-18	Revision Revision of phase equilibrium
	28-Apr-18	Revision Revision of Desilerisation

Lesson Plan

Name of the ~~Assistant/ Associate Professor~~ Sanjay Rawat

Class and Section: B.Sc 3rd year VI Sem (Paper II)

Subject: Physical chemistry theory + Practical

Week	Date	Topics
1	1-Feb-18	Non-radiative process
	2-Feb-18	Internal Conversion, Inter system crossing
	3-Feb-18	Revised practical to determine the strength of dibasic acid solution conductometrically
	4-Feb-18	Sunday
2	5-Feb-18	Quantum Yield
	6-Feb-18	Photosenstized reaction - energy processes
	7-Feb-18	example of Photosenstized Rexn
	8-Feb-18	Assignment of Grotthus - Drapper Law
	9-Feb-18	Introduction of solution
	10-Feb-18	Maharshi Dayanand Saraswati Jayanti
	11-Feb-18	Sunday
3	12-Feb-18	Ideal and Non-ideal solution
	13-Feb-18	Maha Shivratri
	14-Feb-18	Method of expressing Conc. of solution.
	15-Feb-18	Activity
	16-Feb-18	Activity cofficient
	17-Feb-18	Practical to determine the solubility and solubility product of sparingly soluble salt conductometrically
	18-Feb-18	Sunday
4	19-Feb-18	Dilute solution explanation
	20-Feb-18	Colligative properties
	21-Feb-18	Raoult's Law
	22-Feb-18	Relative lowering of vapour Pressure
	23-Feb-18	Molecular weight determination
	24-Feb-18	Revised practical to determine the solubility and solubility product of sparingly soluble salt conductometrically.
	25-Feb-18	Sunday
5	26-Feb-18	Osmosis
	27-Feb-18	Osmosis Law of osmotic Pressure
	28-Feb-18	Osmosis law and its measurement.

Lesson Plan

Name of the Assistant/ Associate Professor..... Savita Chauhan (Paper I + III)

Class and Section..... B.Sc 3rd year VI th semester

Subject:..... INORGANIC CHEMISTRY THEORY + ORGANIC CHEMISTRY THEORY + PRACTICLE

Week	Date	Topics
1	1-Jan-18	Defination of organometallic compound, its Classification
	2-Jan-18	Preparation & properties of Alkyl of Li
	3-Jan-18	Prep^{n} and properties of Alkyl of Al, Hg
	4-Jan-18	Prep^{n} and properties of Alkyl of Sn
	5-Jan-18	Brief account of metal - ethylenic Complex
	6-Jan-18	Practicle to prepare o-chlorobenzoic acid from anthranilic acid
	7-Jan-18	Sunday
2	8-Jan-18	Mononuclear Carbonyl and its example
	9-Jan-18	Nature of Bonding in Metal Carbonyl
	10-Jan-18	Assignment on prep^{n} and properties of Alkyl Li, Hg
	11-Jan-18	Introduction of Molecular orbital picture
	12-Jan-18	Aromatic Characterstic of Pyrrole, furan
	13-Jan-18	Revised practical to prepare o-chlorobenzoic acid from anthranilic acid
	14-Jan-18	Sunday
3	15-Jan-18	Aromatic Characterstic of thiophene and pyridine
	16-Jan-18	Methods of Synthesis and Chemical Rex^{n}
	17-Jan-18	Mechanism of electrophilic substitution
	18-Jan-18	Mechanism of Nucleophilic substitution Rex^{n} in Pyridine deriv
	19-Jan-18	Comparision of Basicity of Pyridine, piperidine & Pyrrole
	20-Jan-18	Practical to prepare p-bromoaniline from p-bromo-acetanilide
	21-Jan-18	Sunday
4	22-Jan-18	Vasant Panchami
	23-Jan-18	Assignment on Basicity of Pyridine
	24-Jan-18	Sir Chhotu Ram Jayanti
	25-Jan-18	Arrhenius Concept of Acid - Base
	26-Jan-18	Republic Day
	27-Jan-18	Revised practical to prepare p-bromoaniline from p-bromo acetanilide
	28-Jan-18	Sunday
5	29-Jan-18	Bronsted - Lowry & Lux-Flood Concept of Acid & Base
	30-Jan-18	Solvent System Concept of Acid-Base Concept.
	31-Jan-18	Lewis Concept of Acid-Base Concept.

Savitach

Lesson Plan

Name of the Assistant/ Associate Professor.... Samay Rawat

Class and Section:.... B.Sc 3rd year VI Sem (Paper-II)

Subject:.... Physical chemistry theory + Practical

Week	Date	Topics
1	1-Feb-18	Non-radiative process
	2-Feb-18	Internal Conversion, Inter system crossing
	3-Feb-18	Revised practical to determine the strength of dibasic acid solution conductometrically
	4-Feb-18	Sunday
2	5-Feb-18	Quantum Yield
	6-Feb-18	Photosenstized reaction - energy processes
	7-Feb-18	example of Photosenstized Rexn
	8-Feb-18	Assignment of Grotthus - Drapper Law
	9-Feb-18	Introduction of solution
	10-Feb-18	Maharshi Dayanand Saraswati Jayanti
	11-Feb-18	Sunday
3	12-Feb-18	Ideal and Non-ideal solution
	13-Feb-18	Maha Shivratri
	14-Feb-18	Method of expressing Conc. of solution.
	15-Feb-18	Activity
	16-Feb-18	Activity coefficient
	17-Feb-18	Practical to determine the solubility and solubility product of sparingly soluble salt conductometrically
	18-Feb-18	Sunday
4	19-Feb-18	Dilute solution explanation
	20-Feb-18	Colligative properties
	21-Feb-18	Raoult's Law
	22-Feb-18	Relative lowering of vapour Pressure
	23-Feb-18	Molecular weight determination
	24-Feb-18	Revised practical to determine the solubility and solubility product of sparingly soluble salt conductometrically.
	25-Feb-18	Sunday
5	26-Feb-18	Osmosis
	27-Feb-18	Osmosis Law of osmotic Pressure
	28-Feb-18	Osmosis law and its measurement.

Name of the Assistant/ Associate Professor: Savita Chauhan

Lesson Plan (Paper I-III)

Class and Section: B.Sc. 3rd year VI sem

Subject: Inorganic chemistry theory + Organic chemistry theory and practical

Week	Date	Topics
1	1-Feb-18	Relative Strength of Acid-Base Concept
	2-Feb-18	Concept of Hard and Soft Acid-Bases.
	3-Feb-18	Practical to prepare m-nitroaniline from m-dinitro-benzene
	4-Feb-18	Sunday
2	5-Feb-18	Symbiosis of Acid-Base
	6-Feb-18	electronegativity and Hardness of Acid-Base & Softness
	7-Feb-18	Assignment on relative Strength of Acid-Base Rxn
	8-Feb-18	Introduction to condensed five memb. heterocycle
	9-Feb-18	Introduction to condensed six memb. heterocycle.
	10-Feb-18	Maharshi Dayanand Saraswati Jayanti
	11-Feb-18	Sunday
3	12-Feb-18	Prepn and Reaction of Indole
	13-Feb-18	Maha Shivratri
	14-Feb-18	Prepn and Reaction of quinoline & Isoquinoline
	15-Feb-18	fisher Indole Synthesis.
	16-Feb-18	Skraup Synthesis & Bischler-Napieralski synthesis.
	17-Feb-18	Revised practical to prepare m-nitroaniline from m-dinitro benzene
	18-Feb-18	Sunday
4	19-Feb-18	Mechanism of electrophilic substitution Rxn of Quinoline
	20-Feb-18	Mechanism of electrophilic subs of Isoquinoline
	21-Feb-18	Assignment on Bischler-Napieralski Synthesis.
	22-Feb-18	Essential and trace element in biological process
	23-Feb-18	Metalloporphyrins with special reference to haemoglobin
	24-Feb-18	Practical to prepare S-Benzyl-iso-thiouronium chloride from thiourea
	25-Feb-18	Sunday
5	26-Feb-18	Metalloporphyrin with special reference to myoglobin
	27-Feb-18	Biological role of Alkali and Alkaline earth metal
	28-Feb-18	Biological role of Alkali and Alkaline earth metal to Ca^{2+}

Savita

Name of the Assistant/Associate Professor: Savita Chauhan

Lesson Plan (Paper - I - III)

Class and Section: B.Sc. 3rd year VI Sem

Subject: Inorganic Chemistry theory + Organic Chemistry theory and Practical

Week	Date	Topics
1	1-Mar-18	Guru Ravidas Birthday
	2-Mar-18	Holi
	3-Mar-18	Revised practical to prepare S-Benzyl-isothiouranium chlorid from thiourea
	4-Mar-18	Sunday
2	5-Mar-18	Nitrogen - fixation.
	6-Mar-18	Assignment on Metallo porphyrins with reference to Hg.
	7-Mar-18	Acidity of Hydrogen, Alkylation of diethyl malonate
	8-Mar-18	Alkylation of ethyl-Acetoacetate
	9-Mar-18	Synthesis of ethyl-Acetoacetate
	10-Mar-18	Revised practical to prepare o-chlorobenzoic acid from anthranilic acid
	11-Mar-18	Sunday
3	12-Mar-18	Claisen Condensation, Keto-enol tautomerism of it.
	13-Mar-18	Assignment on claisen condensation.
	14-Mar-18	Silicon - its preparation
	15-Mar-18	Properties of Silicon
	16-Mar-18	Structure and uses of silicon
	17-Mar-18	Revised practical to prepare - p-bromo aniline from p-bromo acetanilide
	18-Mar-18	Sunday
4	19-Mar-18	Preparation, properties of Phosphazenes
	20-Mar-18	Structure and uses of Phosphazenes
	21-Mar-18	Assignment on Str. and properties, uses of Phosphazene
	22-Mar-18	Introduction of synthetic polymers
	23-Mar-18	Addition or Chain-growth polymerisation
	24-Mar-18	Revised practical to prepare m-nitro aniline from m-dinitrobenzene
	25-Mar-18	Sunday/ Ram Navami
5	26-Mar-18	Free Radical vinyl polymerisation. Ionic vinyl Polymerisation
	27-Mar-18	Ziegler-Natta Polymerisation and vinyl Polymer
	28-Mar-18	Condensation or step growth Polymerisation
	29-Mar-18	Mahavir Jayanti
	30-Mar-18	Polyester, Polyamide, Phenol formaldehyde resins
	31-Mar-18	Uses of polymers.

Savita

Name of the Assistant/ Associate Professor: Savita Chauhan **Lesson Plan** (paper I - III)
Class and Section: B.Sc 3rd year VI Sem
Subject: Inorganic Chemistry theory + Organic chemistry theory + Practical

Week	Date	Topics
1	1-Apr-18	Sunday
	2-Apr-18	Epoxy resins - Polyurethanes
	3-Apr-18	Natural - Synthetic Rubber
	4-Apr-18	Assignment on vinyl Polymerization.
	5-Apr-18	Classification of amino Acid
	6-Apr-18	Acid - Base behaviour, Isoelectric point
	7-Apr-18	Acid - Base equilibrium in amino acids
	8-Apr-18	Sunday
2	9-Apr-18	electrophoresis, Prep^{n} of Amino - Acid.
	10-Apr-18	Structure & Nomenclature of Peptide
	11-Apr-18	Structure & Nomenclature of Proteines.
	12-Apr-18	Classification of Proteins.
	13-Apr-18	Peptide structure determination, Selective hydrolysis
	14-Apr-18	Dr Ambedkar Jayanti / Vaisakhi
	15-Apr-18	Sunday
3	16-Apr-18	Classical peptide synthesis, Solid - Phase peptide Synthesis
	17-Apr-18	Struct Peptides, Proteins - Primary & Secondary structure
	18-Apr-18	Parashurama Jayanti
	19-Apr-18	Assignment on Selective hydrolysis of Peptides.
	20-Apr-18	Revision Revision of organometallic Chemistry
	21-Apr-18	Revision Revision of Acid and Bases, HSAB Concept
	22-Apr-18	Sunday
4	23-Apr-18	Revision Revision of Bioinorganic Chemistry, Silicons, phospha-
	24-Apr-18	Revision Revision of Heterocyclic Compounds - I zenes
	25-Apr-18	Revision Revision of Heterocyclic compounds - II
	26-Apr-18	Revision Revision of organosulphur compounds
	27-Apr-18	Revision Revision of organic synthesis via enolates
	28-Apr-18	Revision Revision of Synthetic polymers and Amino acids, peptides and proteins

Savitach

Lesson Plan

Name of the Assistant/ Associate Professor.... BHAGWATI

Class and Section. ... B.Sc. VI Sem.

Subject: ... NUCLEAR PHYSICS (PAPER-II) (PHYSICS)

Week	Date	Topics
1	1-Jan-18	Introduction to Nuclear Physics
	2-Jan-18	Proton-$e^{\ominus}$ and proton neutron hypothesis
	3-Jan-18	Basic properties of atomic nuclei: Charge, Mass, Size, density
	4-Jan-18	Nuclear spin, Magnetic dipole moment
	5-Jan-18	Electric quadrupole moment, statistics, parity
	6-Jan-18	Nuclear stability
	7-Jan-18	Sunday
2	8-Jan-18	Nuclear mass and binding energy
	9-Jan-18	B.E. per nucleon, packing fraction
	10-Jan-18	Binding energy curve
	11-Jan-18	Nuclear stability, determination of size of nucleus
	12-Jan-18	Distance of closest approach, ~~etc~~ Nuclear radius
	13-Jan-18	Assignment on B.E. and packing fraction
	14-Jan-18	Sunday
3	15-Jan-18	Nuclear mass and Bain bridge Mass Spectrograph
	16-Jan-18	Bain bridge and Jordan double focussing spectrograph
	17-Jan-18	Nuclear charge and its determination by Moseley law
	18-Jan-18	X ray spectral method
	19-Jan-18	Numericals on mass determination
	20-Jan-18	Numericals on Binding energy
	21-Jan-18	Sunday
4	22-Jan-18	Vasant Panchami
	23-Jan-18	Assignment on Nuclear mass and nuclear size determination
	24-Jan-18	Sir Chhotu Ram Jayanti
	25-Jan-18	Interaction of heavy charge particle with matter
	26-Jan-18	Republic Day
	27-Jan-18	Stopping power
	28-Jan-18	Sunday
5	29-Jan-18	Alpha disintegration
	30-Jan-18	Theory of α disintegration
	31-Jan-18	Mathematical treatment of α decay

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Lesson Plan

Name of the Assistant/ Associate Professor: BHAGWATI

Class and Section: B.Sc. VI th Sem

Subject: NUCLEAR PHYSICS (PAPER-II) (PHYSICS)

Week	Date	Topics
1	1-Feb-18	Range and Straggling of α particles
	2-Feb-18	Straggling and its causes
	3-Feb-18	Energetics of α decay
	4-Feb-18	Sunday
2	5-Feb-18	Geiger Nuttal law
	6-Feb-18	Interaction of light charged particles with matter
	7-Feb-18	Neutrino hypothesis
	8-Feb-18	Types of β decay
	9-Feb-18	Distinction b/w two types of neutrino
	10-Feb-18	Maharshi Dayanand Saraswati Jayanti
	11-Feb-18	Sunday
3	12-Feb-18	Energetics of β decay
	13-Feb-18	Maha Shivratri
	14-Feb-18	Difference b/w positron emission & $e^{\ominus}$ capture
	15-Feb-18	Inverse β decay
	16-Feb-18	Energy loss of β particles in matter
	17-Feb-18	Range of electrons
	18-Feb-18	Sunday
4	19-Feb-18	Nature of γ rays
	20-Feb-18	Energetics of Gamma decay and recoil effects
	21-Feb-18	Photoelectric effect
	22-Feb-18	Compton effect
	23-Feb-18	Pair production
	24-Feb-18	Absorption of Gamma rays
	25-Feb-18	Sunday
5	26-Feb-18	Linear attenuation Coefficient, Mass attenuation coefficient
	27-Feb-18	Half thickness
	28-Feb-18	Importance of Gamma ray interaction

BJ

Lesson Plan

e of the Assistant/ Associate Professor: BHAGWATI
s and Section: B.Sc. VI th Sem
bject: NUCLEAR PHYSICS (PAPER-II) (PHYSICS)

eek	Date	Topics
1	1-Mar-18	Guru Ravidas Birthday
	2-Mar-18	Holi
	3-Mar-18	Assignment on interaction of nuclear radiation with matter
	4-Mar-18	Sunday
2	5-Mar-18	Introduction to nuclear reactions
	6-Mar-18	Elastic and inelastic scattering, Nuclear disintegration
	7-Mar-18	Photo-nuclear reaction, radiative capture
	8-Mar-18	Direct, heavy ion and spallation reactions
	9-Mar-18	Conservation law
	10-Mar-18	Q values
	11-Mar-18	Sunday
3	12-Mar-18	Kinematics of nuclear reaction
	13-Mar-18	Exoergic and endoergic reactions, threshold energy
	14-Mar-18	Nuclear reactors introduction
	15-Mar-18	General aspects of reactor design
	16-Mar-18	Classification of nuclear reactors
	17-Mar-18	Nuclear fission reactor: Principle
	18-Mar-18	Sunday
4	19-Mar-18	Construction and working of nuclear fission reactor
	20-Mar-18	Breeder reactor
	21-Mar-18	Power reactors
	22-Mar-18	Power reactors in india
	23-Mar-18	Uses of nuclear fission reactors
	24-Mar-18	Nuclear fusion reactor introduction
	25-Mar-18	Sunday/ Ram Navami
5	26-Mar-18	Condition for controlled exothermic fusion reaction
	27-Mar-18	Lawson criterion, Heating of plasma
	28-Mar-18	Plasma Confinement
	29-Mar-18	Mahavir Jayanti
	30-Mar-18	Laser fusion reactor
	31-Mar-18	Advantage of Nuclear fusion reactor

BJ

Lesson Plan

Name of the Assistant/ Associate Professor: BHAGWATI
Class and Section: B.Sc. VI th Sem
Subject: NUCLEAR PHYSICS (PAPER-II) (PHYSICS)

Week	Date	Topics
1	1-Apr-18	Sunday
	2-Apr-18	Introduction to Particle accelerators
	3-Apr-18	Linear accelerators : Principle, Construction, Working, Advantage, Limitations
	4-Apr-18	Tendem accelerators: Principle, Construction, Working, Advantage, Limitations
	5-Apr-18	Cyclotron: Principle, Construction, Working, advantage, limitations
	6-Apr-18	Betatron accelerator: Principle, Construction, Working, uses
	7-Apr-18	Ionisation chamber: Principle, Construction, Working, Uses,
	8-Apr-18	Sunday
2	9-Apr-18	Proportional Counter: Principle Construction, Working, Uses, limitations
	10-Apr-18	GM Counter: Principle, theory, Working, Uses, Quenching, dead time
	11-Apr-18	Scientillation Counter: Principle, Construction, Working, theory, Uses
	12-Apr-18	Semiconductor detector: Principle Construction, Working, Uses, theory
	13-Apr-18	Differenciate b/w Ionisation Chamber, Prop. Counter, GM Counter
	14-Apr-18	Dr Ambedkar Jayanti / Vaisakhi
	15-Apr-18	Sunday
3	16-Apr-18	Assignment on Nuclear reactors, accelerators & detectors
	17-Apr-18	Numericals on accelerators and detectors
	18-Apr-18	Parashurama Jayanti
	19-Apr-18	Numericals on nuclear reactions
	20-Apr-18	Revision Nuclear mass, B.E., Properties of nucleus
	21-Apr-18	Revision Bain bridge, Jordan mass spectrograph
	22-Apr-18	Sunday
4	23-Apr-18	Revision Mosley law, Rutherford back scattering
	24-Apr-18	Revision Int. of heavy charge particle, Range, straggling
	25-Apr-18	Revision Int. of light charge particle
	26-Apr-18	Revision Int. of radiations, Nuclear reactions
	27-Apr-18	Revision Nuclear reactors, accelerator
	28-Apr-18	Revision Ionisation Chamber, Proportional Counter, GM Counter, Scientillation Counter, Semiconductor detector

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Lesson Plan

Name of the Assistant/ Associate Professor... BHAGWATI

Class and Section. B.SC. VI-th Sem

Subject: ATOMIC, MOLECULAR AND LASER PHYSICS (PAPER-I) [PHYSICS]

Week	Date	Topics
1	1-Jan-18	Introduction to spectroscopy.
	2-Jan-18	Spectra of H atom.
	3-Jan-18	Quantum theory, Bohr's atomic model
	4-Jan-18	Bohr-Sommerfield model
	5-Jan-18	Space Quantisation and Larmor theorem & significance
	6-Jan-18	Lab:- To determine resolving power of a prism.
	7-Jan-18	Sunday
2	8-Jan-18	Magnetic moment of atom- Bohr Magneton
	9-Jan-18	Spectra of alkali metals
	10-Jan-18	Penetrating and non penetrating orbits
	11-Jan-18	Vector atom model
	12-Jan-18	Quantum numbers associated with vector atom model
	13-Jan-18	Lab:- To determine diameter of lycopodium power particle using Corona rings.
	14-Jan-18	Sunday
3	15-Jan-18	Spin-orbit interaction of electron
	16-Jan-18	Spin-orbit interaction of non penetrating orbits.
	17-Jan-18	Spin-orbit interaction for penetrating orbits
	18-Jan-18	L S Coupling
	19-Jan-18	Pauli-Exclusion principle and term values
	20-Jan-18	Lab:- To determine resolving power of plane transmission grating
	21-Jan-18	Sunday
4	22-Jan-18	Vasant Panchami
	23-Jan-18	Spin-Orbit interaction energies for two valance-e$^{\ominus}$ system
	24-Jan-18	Sir Chhotu Ram Jayanti
	25-Jan-18	Γ factor for LS Coupling and Lande-Int. rule.
	26-Jan-18	Republic Day
	27-Jan-18	Lab:- To determine wavelength of sodium light by use of fresnel biprism.
	28-Jan-18	Sunday
5	29-Jan-18	J-J Coupling Scheme
	30-Jan-18	Assignment on Vector atom model, L-S, J-J Coupling
	31-Jan-18	Introduction to Atomic & Molecular Physics

BJ

Lesson Plan

Name of the Assistant/ Associate Professor: BHAGWATI

Class and Section: B.Sc. VI th Sem.

Subject: ATOMIC, MOLECULAR AND LASER PHYSICS (PAPER-I) (PHYSICS)

Week	Date	Topics
1	1-Feb-18	Zeeman effect for a single valance-electron
	2-Feb-18	Zeeman effect of D_1 and D_2 lines of Na atom
	3-Feb-18	Lab:- To determine Young Modulus of material of rod by Searle's optical interference method
	4-Feb-18	Sunday
2	5-Feb-18	Paschen-Back effect for single valance-e
	6-Feb-18	Paschen-Back pattern of principal series doublet
	7-Feb-18	Stark effect of H atom
	8-Feb-18	Weak field stark effect in H.
	9-Feb-18	Assignment on Zeeman, Paschen, Stark effect
	10-Feb-18	Maharshi Dayanand Saraswati Jayanti
	11-Feb-18	Sunday
3	12-Feb-18	Introduction to Molecular Physics
	13-Feb-18	Maha Shivratri
	14-Feb-18	Electronic states of a diatomic molecule
	15-Feb-18	Rigid Rotator
	16-Feb-18	Non rigid rotator
	17-Feb-18	Lab:- To determine diameter of thin wire by diffraction method using He-Ne laser
	18-Feb-18	Sunday
4	19-Feb-18	Harmonic Oscillator Model
	20-Feb-18	Anharmonic Oscillator Model
	21-Feb-18	Vibrating rotator Model of diatomic molecule
	22-Feb-18	Raman effect introduction
	23-Feb-18	Classical theory of Raman effect
	24-Feb-18	Lab:- To study double slit interference by He-Ne laser
	25-Feb-18	Sunday
5	26-Feb-18	Quantum theory of Raman effect
	27-Feb-18	Raman spectra
	28-Feb-18	Experiment observation of Raman spectra

Lesson Plan

Name of the Assistant/ Associate Professor: BHAGWATI

Class and Section: B.Sc. VI th Sem

Subject: ATOMIC, MOLECULAR AND LASER PHYSICS (PAPER-I) (PHYSICS)

Week	Date	Topics
1	1-Mar-18	Guru Ravidas Birthday
	2-Mar-18	Holi
	3-Mar-18	Lab:- To determine resolving power of prism by spectrometer
	4-Mar-18	Sunday
2	5-Mar-18	Application of Raman Spectra
	6-Mar-18	Electronic Spectra
	7-Mar-18	Vibrational Structure
	8-Mar-18	Rotational Structure
	9-Mar-18	Assignment on molecular Physics
	10-Mar-18	Lab:- To determine resolving power of plane transmission grating
	11-Mar-18	Sunday
3	12-Mar-18	Introduction to Laser Physics
	13-Mar-18	Main components of Laser
	14-Mar-18	Properties of Laser beam - Directionality,
	15-Mar-18	Intensity, monochromaticity, Coherence
	16-Mar-18	temporal and Spacial Coherence
	17-Mar-18	Lab:- To find diameter of lycopodium powder using corona rings.
	18-Mar-18	Sunday
4	19-Mar-18	Einstein's Coefficients and possibility of amplification
	20-Mar-18	Momentum transfer and life time of energy states
	21-Mar-18	Amplication of Radiation
	22-Mar-18	Kinetics of Optical absorption
	23-Mar-18	Line shape function, line broadening mechanism
	24-Mar-18	Lab:- To determine wavelength of sodium light by using Fresnel biprism
	25-Mar-18	Sunday/ Ram Navami
5	26-Mar-18	Natural broadening
	27-Mar-18	Collision broadening
	28-Mar-18	Doppler broadening
	29-Mar-18	Mahavir Jayanti
	30-Mar-18	Numericals on Einstein theory
	31-Mar-18	Lab:- To study double slit interference by Helium-Neon laser

Name of the Assistant/ Associate Professor: BHAGWATI **Lesson Plan**

Class and Section: B.Sc. VI th Sem

Subject: ATOMIC, MOLECULAR AND LASER PHYSICS (PAPER-I) (PHYSICS)

Week	Date	Topics
1	1-Apr-18	Sunday
	2-Apr-18	Assignment on Einstein quantum theory & abs. of radiation
	3-Apr-18	Introduction of Laser
	4-Apr-18	Resonant Cavity
	5-Apr-18	Threshold Condition
	6-Apr-18	Laser Pumping
	7-Apr-18	Lab: To determine thick-ness of thin plate by air wedge method
	8-Apr-18	Sunday
2	9-Apr-18	Ruby Laser : Principle, spectroscopy
	10-Apr-18	Ruby Laser : Construction and working
	11-Apr-18	He & Ne Laser : Principle, Const. and working
	12-Apr-18	Semiconductor Laser : Features, Condition for lasing action
	13-Apr-18	Injection Laser, Holography, Use of Laser in industry
	14-Apr-18	Dr Ambedkar Jayanti / Vaisakhi
	15-Apr-18	Sunday
3	16-Apr-18	Use of Laser in science, and medicine, communication
	17-Apr-18	Use of Laser in communication
	18-Apr-18	Parashurama Jayanti
	19-Apr-18	Assignment on Laser Systems and application of laser
	20-Apr-18	Revision Vector atom model, L-S, J-J Coupling, Spin orbit interaction
	21-Apr-18	Revision Zeeman effect of D_1, D_2 lines of Na, Paschen Backeffect
	22-Apr-18	Sunday
4	23-Apr-18	Revision Weak field Starkeffect, Raman effect
	24-Apr-18	Revision Features of Laser, Einstein Coefficients, Momentum transfer and life time
	25-Apr-18	Revision Kinetics of optical absorption, He-Ne Laser
	26-Apr-18	Revision Ruby Laser (Principle, Construction and working)
	27-Apr-18	Revision Application of Laser in medicine, industry
	28-Apr-18	Revision Application of Laser in science.

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Lesson Plan

Name of the Assistant/ Associate Professor... Priya Tanwar
Class and Section. B.Sc. III 6th semester (Mathematics)
Subject: Linear Algebra, Real and complex analysis.

Week	Date	Topics
1	1-Jan-18	Introduction of linear Algebra
	2-Jan-18	Definition of Vector space and Examples
	3-Jan-18	Subspace and its examples
	4-Jan-18	Sum and direct sum of subspaces.
	5-Jan-18	linear span
	6-Jan-18	Linearly Independent and dependent set
	7-Jan-18	Sunday
2	8-Jan-18	Theorem and Result base on L.I and L.D
	9-Jan-18	Finitely generated Vector space.
	10-Jan-18	Existence theorem for Basis
	11-Jan-18	Basis and Dimension
	12-Jan-18	Finite dimensional Vector spaces
	13-Jan-18	Invariance of number of elements.
	14-Jan-18	Sunday
3	15-Jan-18	Quotient space and its dimension
	16-Jan-18	Assignment
	17-Jan-18	Homomorphism of Vector spaces.
	18-Jan-18	Isomorphism of Vector spaces
	19-Jan-18	Theorem base on it
	20-Jan-18	linear transformations and its example
	21-Jan-18	Sunday
4	22-Jan-18	Vasant Panchami
	23-Jan-18	linear forms on Vector space.
	24-Jan-18	Sir Chhotu Ram Jayanti
	25-Jan-18	Theorem of linear Transformations
	26-Jan-18	Republic Day
	27-Jan-18	Examples of linear Transformations.
	28-Jan-18	Sunday
5	29-Jan-18	Introduction of Dual space.
	30-Jan-18	Vector space of all the linear Transformation of Dual spaces.
	31-Jan-18	Theorems base on it and Examples.

Priya Tanwar

Lesson Plan

Name of the Assistant/ Associate Professor: Priya Tanwar
Class and Section: B.Sc. III 6th Sem. (Mathematics)
Subject: Linear Algebra & Real and complex analysis

Week	Date	Topics
1	1-Feb-18	Bidual Spaces
	2-Feb-18	Theorem base on Bidual space and its examples.
	3-Feb-18	Annihilator of Subspaces of finite Dimentional V. space.
	4-Feb-18	Sunday
2	5-Feb-18	Theorem base on Annihilator
	6-Feb-18	Examples of Annihilator.
	7-Feb-18	Null spaces Range space of L.T
	8-Feb-18	Theorem base on null space & Range space.
	9-Feb-18	Rank and nullity definition and Examples.
	10-Feb-18	Maharshi Dayanand Saraswati Jayanti
	11-Feb-18	Sunday
3	12-Feb-18	Rank and nullity Thm.
	13-Feb-18	Maha Shivratri
	14-Feb-18	Assignment
	15-Feb-18	Algebra of linear Transformation.
	16-Feb-18	Theorem base on Algebra of L.T
	17-Feb-18	Examples.
	18-Feb-18	Sunday
4	19-Feb-18	Minimal polynomial of a L.T
	20-Feb-18	Examples base of minimal polynomial.
	21-Feb-18	Singular and non-Singular definition and Theorem.
	22-Feb-18	Examples
	23-Feb-18	Matrix of linear Transformation.
	24-Feb-18	Theorem base on linear Transformation in matrix.
	25-Feb-18	Sunday
5	26-Feb-18	Change of basis and Examples
	27-Feb-18	Introduction of Eigen Values.
	28-Feb-18	Define E.Value & Eigen Vector.

Priya Tanwar

Name of the Assistant/ Associate Professor: Priya Tanwar

Lesson Plan

Class and Section: B.Sc III, 6th Sem. (Mathematics)

Subject: Linear Algebra & Real and Complex Analysis.

Week	Date	Topics
1	1-Mar-18	Guru Ravidas Birthday
	2-Mar-18	Holi
	3-Mar-18	Theorem on the base of E. Values and Vector.
	4-Mar-18	Sunday
2	5-Mar-18	Problems to find eigen value.
	6-Mar-18	Assignment.
	7-Mar-18	Introduction of Inner product spaces.
	8-Mar-18	Theorem and Examples of Inner product spaces.
	9-Mar-18	Cauchy - Schwarz inequality.
	10-Mar-18	Problems on Cauchy - schwarz inequality
	11-Mar-18	Sunday
3	12-Mar-18	Orthogonal Vectors.
	13-Mar-18	Problems of orthogonal Vectors.
	14-Mar-18	Orthogonal complements.
	15-Mar-18	Orthogonal set and its examples.
	16-Mar-18	Basis and its examples.
	17-Mar-18	Bessel's Inequality and its examples.
	18-Mar-18	Sunday
4	19-Mar-18	Gram - Schmidt
	20-Mar-18	Problems of Gram - Schmidt
	21-Mar-18	Orthogonalization process.
	22-Mar-18	Adjoint of a linear transformation.
	23-Mar-18	Unitary linear transformations and its examples.
	24-Mar-18	Assignment.
	25-Mar-18	Sunday/ Ram Navami
5	26-Mar-18	Introduction of real and complex numbers
	27-Mar-18	Jacobians and its examples.
	28-Mar-18	Beta and Gama functions.
	29-Mar-18	Mahavir Jayanti
	30-Mar-18	Examples of Beta and Gama Functions.
	31-Mar-18	Double Integrals.

Priya Tanwar

Lesson Plan

Name of the Assistant/ Associate Professor: Priya Tanwar
Class and Section: B.Sc III, 6th sem. (Mathematics)
Subject: Linear Algebra, Real and complex analysis

Week	Date	Topics
1	1-Apr-18	Sunday
	2-Apr-18	Triple integrals
	3-Apr-18	examples base on double and Triple integrals.
	4-Apr-18	Dirichlets integrals.
	5-Apr-18	Problem base on Dirichlets integrals.
	6-Apr-18	Change of order of integration in double integrals.
	7-Apr-18	Assignment.
	8-Apr-18	Sunday
2	9-Apr-18	Fourier's series and its expansion of piecewise monotonic function
	10-Apr-18	Problem base on fourier's series.
	11-Apr-18	Properties of Fourier co-efficients and its examples.
	12-Apr-18	Dirichlet's conditions and examples.
	13-Apr-18	Parseval's Indentity for fourier series.
	14-Apr-18	Dr Ambedkar Jayanti / Vaisakhi
	15-Apr-18	Sunday
3	16-Apr-18	Fourier series for even and odd functions and its examples.
	17-Apr-18	Half range series, change of intervals and its examples.
	18-Apr-18	Parashurama Jayanti
	19-Apr-18	Assignment.
	20-Apr-18	Revision Vector space and Quotient space.
	21-Apr-18	Revision Linear Transformation.
	22-Apr-18	Sunday
4	23-Apr-18	Revision concept of Basis, dimension.
	24-Apr-18	Revision Dual space.
	25-Apr-18	Revision concept of Rank, Range, nulity, null space.
	26-Apr-18	Revision concept of eigen value and eigen vector.
	27-Apr-18	Revision concept of orthogonal and orthonormal.
	28-Apr-18	Revision Concept of Dirichlets integrals and fourier series.

Priya Tanwar

Lesson Plan

Name of the Assistant/ Associate Professor: Vinny Banga
Class and Section: BSc 6th Sem (Mathematics)
Subject: Numerical analysis (III), Real and complex analysis (I)

Week	Date	Topics
1	1-Jan-18	Introduction to numerical analysis and operators
	2-Jan-18	Forward and backward operators and their relation
	3-Jan-18	Finding the missing terms and effect of error
	4-Jan-18	Examples based on difference tabulas values
	5-Jan-18	Interpolation with equal intervals
	6-Jan-18	Interpolation with unequal intervals.
	7-Jan-18	Sunday
2	8-Jan-18	Assignments
	9-Jan-18	Newton's Divided difference and their numericals
	10-Jan-18	Lagrange's Interpolation formulae and their theorem.
	11-Jan-18	Hermite formula and numericals
	12-Jan-18	Few complicated problems based on above topics
	13-Jan-18	Assignment
	14-Jan-18	Sunday
3	15-Jan-18	Introduction to central differences
	16-Jan-18	Gauss forward interpolation formulae
	17-Jan-18	Gauss backward interpolation formulae.
	18-Jan-18	Exercises based on above topics and numerical solving
	19-Jan-18	Sterling and Bessel formula
	20-Jan-18	Assignment
	21-Jan-18	Sunday
4	22-Jan-18	Vasant Panchami
	23-Jan-18	A brief review of probability including definitions
	24-Jan-18	Sir Chhotu Ram Jayanti
	25-Jan-18	Probability distribution of random variable
	26-Jan-18	Republic Day
	27-Jan-18	Mean and variance of random variable.
	28-Jan-18	Sunday
5	29-Jan-18	Mean, Variance and properties of binomial distribution
	30-Jan-18	Assignment
	31-Jan-18	Guru Ravidas Birthday

Vinny