

RPS Degree College, Balana (Mahendergarh)

Class and Section: B.Sc VI 6NM A

Subject- Inorganic Chemistry

Name of the Faculty : Dr. Prashant Kumar

Week	Lecture	Date	Topics
1	1	20-Jan-20	Introduction of syllabus.
	2	21-Jan-20	Basics of organomettalic chemistry
2	3	27-Jan-20	Classification of organomettalic compounds
3	4	28-Jan-20	Nomenclature of organomettalic compounds
	5	03-Feb-20	Preparation of organomettalic compounds
4	6	04-Feb-20	Bonding of organomettalic compounds
	7	10-Feb-20	Mononuclear carbonyl and nature of bonding in metal carbonyl
5	8	11-Feb-20	Metal ethylenic complex
	9	17-Feb-20	Revision
6	18-Feb-20		1st Class Test
7	11	24-Feb-20	Acids and bases concept
	12	25-Feb-20	Arrhenius, Bronsted Lowry and Lux-Flood concept
8	13	02-Mar-20	Solvent system, concept of hard and soft acids and bases
	14	03-Mar-20	Lewis concept of acids and bases, symbiosis
9	15	09-Mar-20	Relative strength of acids and bases, electronegativity and hardness and softness
	16	10-Mar-20	Holiday.
10	16-Mar-20		2nd Class Test
11	18	17-Mar-20	Essential and trace elements in biological processes
	19	23-Mar-20	Hemoglobin and myoglobin
12	20	24-Mar-20	Biological role of alkali and alkaline earth metals, nitrogen fixation
	21	30-Mar-20	Silicones, preparation and properties, structure and uses
13	22	31-Mar-20	Phosphazenes preparation, properties, structure and uses
	23	06-Apr-20	revision
15			
16			Final Sessional Test



RPS Degree College, Balana (Mahendergarh)

Lesson Plan


2019-20(Even Semester)

Class and Section: B.Sc.(Non-Med) - 6th Sem.(A)

Subject: Linear Algebra(12BSM362)

Name of the Faculty : Dr. Parveen Kumar Gaur

Week	Lecture	Date	Topics
1	1	16-Jan-20	Subject History & Progress
	2	17-Jan-20	
2	3	20-Jan-20	Introduction to Syllabus, Scheme of Exam & Objectives/Outcomes Learning
	4	21-Jan-20	Test to Check the Learning Level of the Students
	5	22-Jan-20	Vector spaces
	6	23-Jan-20	Vector subspaces
	7	24-Jan-20	Sum and Direct sum of subspaces
3	8	27-Jan-20	Linearly Independent and dependent subsets of a vector space
	9	28-Jan-20	
	10	29-Jan-20	
	11	30-Jan-20	
4	12	31-Jan-20	Finitely generated vector space
	13	03-Feb-20	Existence theorem for basis of a finitely generated vector space
	14	04-Feb-20	Finite dimensional vector spaces
	15	05-Feb-20	
	16	06-Feb-20	
	17	07-Feb-20	
18	10-Feb-20		
19	11-Feb-20	Quotient space and its dimension	
5	20	12-Feb-20	Homomorphism and isomorphism of vector spaces
	21	13-Feb-20	Linear transformations and linear forms on vector spaces
	22	14-Feb-20	Vector space of all the linear transformations
	23	17-Feb-20	Dual Spaces
6	24	18-Feb-20	Bidual spaces
	25	19-Feb-20	Test
	26	20-Feb-20	Annihilator of subspaces of finite dimensional vector spaces
	27	24-Feb-20	Null Space
7	28	25-Feb-20	Range space of a linear transformation
	29	26-Feb-20	Rank and Nullity Theorem
	30	27-Feb-20	Algebra of Linear Transformation
	31	28-Feb-20	
32	02-Mar-20		
33	03-Mar-20	Minimal Polynomial of a linear transformation	
8	34	04-Mar-20	Singular and non-singular linear transformations
	35	05-Mar-20	Matrix of a linear Transformation
	36	06-Mar-20	Change of basis
	37	09-Mar-20	Eigen values and Eigen vectors of linear transformations
38	11-Mar-20		
39	12-Mar-20		
40	13-Mar-20	Inner product spaces	
10	41	16-Mar-20	Cauchy-Schwarz inequality
	42	17-Mar-20	Orthogonal vectors
	43	18-Mar-20	
	44	19-Mar-20	
	45	20-Mar-20	
11	46	23-Mar-20	
	47	24-Mar-20	Bessel's inequality for finite dimensional vector spaces
	48	25-Mar-20	Test
	49	26-Mar-20	Gram Schmidt
	50	27-Mar-20	Orthogonalization process
51	30-Mar-20		
52	31-Mar-20	Adjoint of a linear transformation and its properties	
53	01-Apr-20	Unitary linear transformations	
54	03-Apr-20		
55	06-Apr-20		
56	07-Apr-20		Revision
13	57		08-Apr-20
	58	09-Apr-20	Revision
	59	10-Apr-20	Revision
	60	13-Apr-20	Revision
14	61	14-Apr-20	Revision
	62	15-Apr-20	Revision
	63	16-Apr-20	Revision
	64	17-Apr-20	Revision
15	20th - 24th April 20		Final Sessional Test

RPS Degree College, Balana (Mahendergarh)			
			
Class and Section: B.Sc(N.M.) 6th semester section C , Honors Math 6th			
Subject: Real and Complex Analysis			
Name of the Faculty :Mr. Arvind			
Week	Lecture	Date	Topics
1	7	16/01/20 to 24/01/20	Basics of partial derivatives, Definition of Jacobians and Jacobians of functions with respect to two or more variables
2	5	27/01/20 to 31/01/20	problems of Jacobians
3	5	03/02/20 to 07/02/20	Beta and Gamma functions and related problem
4	5	10/02/20 to 14/02/20	Double and Triple integral problem and application
5	5	17/02/20 to 21/02/20	Double and triple integral continue, Fourier series
6	1st Class Test		
7	5	24/02/20 to 28/02/20	Fourier series continue and Half range sin, cosine series
8	5	02/03/20 to 06/03/20	Parsevals identity for Fourier series and Stereographic projection of complex number
9	5	09/03/20 to 13/03/20	Continuity and Differentiability of complex functions
10			
11	5	16/03/20 to 20/03/20	Analytic function ,Cauchy Riemann equation
12	5	23/03/20 to 27/03/20	Harmonic functions, Mapping of elementary functions
13	5	06/04/20 to 10/04/20	Mappings Rotation, Reflection, Magnification, Inversion, Conformal mapping
14	5	30/03/20 to 03/04/20	Mobius transformation, Fixed points
15	5	13/04/20 to 17/04/20	Cross section, Inverse points, Critical mappings
16	Final Sessional Test		

**RPS Degree College, Balana (Mahendergarh)****Lesson Plan**

2020-21 (Even Semester)

Class and Section: B.Sc.(N.M.)6th (A,C,E)**Subject: Dynamics****Name of the Faculty : Anuradha Yadav**

Week	Lecture	Date	Topics
1	7	16/01/20 to 24/01/20	Velocity and Accelerations along coordinate axes. Relation between linear and angular velocity. Radial and Transverse velocities and accelerations.
2	5	27/01/20 to 31/01/20	Tangential and Normal velocities and accelerations. Relative motion.
3	5	03/02/20 to 07/02/20	Simple harmonic motion .Elastic strings
4	5	10/02/20 to 14/02/20	Newton's laws of motion. Pressure of a body resting on a horizontal plane moving vertically upwards or downwards.
5	5	17/02/20 to 21/02/20	Motion of two bodies connected by a string. Atwood's machine. Work
6			1st Class Test
7	5	24/02/20 to 28/02/20	Power and Energy
8	5	02/03/20 to 06/03/20	Motion of a particle on smooth and rough plane curves.
9	5	09/03/20 to 13/03/20	Motion of a projectile. Velocity at any point of the trajectory.
10			2nd Class Test
11	5	16/03/20 to 20/03/20	Direction of projection for a particle to hit a given point. Motion of a projectile up and down an inclined plane.
12	5	23/03/20 to 27/03/20	Central orbits
13	5	06/04/20 to 10/04/20	Kepler's laws of planetary motion
14	5	30/03/20 to 03/04/20	Motion of a particle in three dimension
15	5	13/04/20 to 17/04/20	Revision
16			Final Sessional Test



**RPS Degree College, Balana (Mahendergarh)****Lesson Plan**

2020-21 (Even Semester)

Class and Section: NM6th B+D**Subject: DYNAMICS****Name of the Faculty : MR. Surender kumar**

Week	Lecture	Date	Topics
1	7	16/01/20 to 24/01/20	Components of velocity and accelerations . Examples and exercise problems. Radial and transverse components of velocity and accelerations. Examples and exercise problems.
2	5	27/01/20 to 31/01/20	vector form of radial and transverse velocity and accelerations. Tangential and normal components of velocity and acceleration. Vector form. Examples and exercise problems.
3	5	03/02/20 to 07/02/20	Relative motion: relative velocity ,magnittude and direction. Relative Acceleration.Simple harmonic motion , periodic motion,frequency , examples and exercise problems.Elastic strings : Horizontal elastic string
4	5	10/02/20 to 14/02/20	Vertical elastic string.Newton law of motions :first ,second and third law of motion.examples, exercise problems.Pressure of body resting ona horizontal plane moving vertically upwords or downwords.Examples and Exercise.
5	5	17/02/20 to 21/02/20	Work , Power and Energy .Definitions of Conservative forces and impulsive forces.Examples and Exercise problems Doubt discussion.
6			1st Class Test
7	5	24/02/20 to 28/02/20	Motion on smooth and rough plane curves : Motion on the ouside and inside of a vertical circle. Cycloid motion : motion on a cycloid.Motion on a rough curve under gravity.
8	5	02/03/20 to 06/03/20	Projectile: Motion of prtojectile Latus rectum , vertex,focus,directrix,axis of the trajectory of a projectile.
9	5	09/03/20 to 13/03/20	Time of flight , horizontal range and greatest height of a projectile.Examples and exercise problems.
10			2nd Class Test
11	5	16/03/20 to 20/03/20	Velocity at any point of the trajectory.Range and time of flight on an inclined plane.Differential equation of centrsal orbit.
12	5	23/03/20 to 27/03/20	Elliptic ,hyperbolic and parabolic orbit.Examples and exercise problems. Doubt discussion.
13	5	06/04/20 to 10/04/20	Keplers law of motions:Theorems ,motion under the inverse square law .Examples and Exercise problems.
14	5	30/03/20 to 03/04/20	Motion of a particle in three dimension . Revision
15	5	13/04/20 to 17/04/20	Revision
16			Final Sessional Test

**RPS Degree College, Balana (Mahendergarh)****Lesson Plan**

2020-21 (Even Semester)

Class and Section: B.Sc.(N.M)6thB**Subject: Linear Algebra****Name of the Faculty : Anuradha yadav**

Week	Lecture	Date	Topics
1	7	16/01/20 to 24/01/20	Vector spaces , subspaces, Sum and direct sum of subspaces
2	5	27/01/20 to 31/01/20	Linear span, Linearly independent and dependent subsets of a vector space. Finitely generated vector space , Existence theorem for basis of a finitely generated vector space
3	5	03/02/20 to 07/02/20	Finite dimensional vector space, Invariance of the no. of elements of basis sets, Dimensions.
4	5	10/02/20 to 14/02/20	Quotient space and its dimension. Homomorphism and isomorphism of vector spaces. Linear transformations.
5	5	17/02/20 to 21/02/20	Linear forms on vector spaces, Vector space of all linear transformations.
6	1st Class Test		
7	5	24/02/20 to 28/02/20	Dual spaces, bidual spaces , annihilator of subspaces of finite dimensional vector spaces.
8	5	02/03/20 to 06/03/20	Null space, Range space of a linear transformation, Rank and nullity theorem
9	5	09/03/20 to 13/03/20	Algebra of linear transformation, minimal polynomial of a linear transformation, Singular and non singular linear transformation.
10	2nd Class Test		
11	5	16/03/20 to 20/03/20	Matrix of a linear transformation , change of basis, Eigen values and Eigen vectors of linear transformations.
12	5	23/03/20 to 27/03/20	Inner product spaces, Cauchy-Schwarz inequality, Orthogonal vectors, Orthogonal complements, Orthogonal sets and Basis.
13	5	06/04/20 to 10/04/20	Bessel's inequality for finite dimensional vector spaces, Gram-Schmidt Orthogonalisation process.
14	5	30/03/20 to 03/04/20	Adjoint of a linear transformation and its properties, Unitary linear transformations.
15	5	13/04/20 to 17/04/20	Revision
16	Final Sessional Test		

**RPS Degree College, Balana (Mahendergarh)****Class and Section: B.Sc(N,M) 6th Semester****Subject: Linear Algebra****Name of the Faculty : Dr. Dushyant**

Week	Lecture	Date	Topics
1	7	16/01/20 to 24/01/20	UNIT-1 Introduction about Linear Algebra. Svllabus of Linear Algebra and Basic Properties Of Linear
2	5	27/01/20 to 31/01/20	Vector Space and Subspace
3	5	03/02/20 to 07/02/20	Direct Sum Of Subspace, Linear Span
4	5	10/02/20 to 14/02/20	Linearly Independent and linearly Dependent Subset Of Vector Space, Finetely Generated Vector Space
5	5	17/02/20 to 21/02/20	Finite Dimensional Vector Space, Basis of Vector Space, Quotient Space and Dimensions
6			1st Class Test
7	5	24/02/20 to 28/02/20	UNIT-2 Homomorphism and Isomorphism of Vector Space, Linear Transformation and Properties
8	5	02/03/20 to 06/03/20	Null Space, Range Space, Rank and Nullity Theorem
9	5	09/03/20 to 13/03/20	UNIT-3 Algebra Of Linear Transformation, Singular and Non Singular Linear Transformation
10			2nd Class Test
11	5	16/03/20 to 20/03/20	Minimal Polynomial of Linear Transformation, Matrix Of Linear Transformation
12	5	23/03/20 to 27/03/20	Dual Space, Eigen Value and Eigen Vector Of Linear Transformation
13	5	06/04/20 to 10/04/20	UNIT-4 Inner Product Space, Cauchy Schwarz Inequality, Orthogonal Vectors
14	5	30/03/20 to 03/04/20	Bessel inequality, Gram Schmidt Process, Adjoint of Linear Transformation
15	5	13/04/20 to 17/04/20	Revision and Important Question for Exam Point of view
16			Final Sessional Test



RPS Degree College, Balana (Mahendergarh)

Lesson Plan


2019-20(Even Semester)

Class and Section: B.Sc.(Non-Med) - 6th Sem.(A)

Subject: Linear Algebra(12BSM362)

Name of the Faculty : Dr. Parveen Kumar Gaur

Week	Lecture	Date	Topics
1	1	16-Jan-20	Subject History & Progress
	2	17-Jan-20	
2	3	20-Jan-20	Introduction to Syllabus, Scheme of Exam & Objectives/Outcomes Learning
	4	21-Jan-20	Test to Check the Learning Level of the Students
	5	22-Jan-20	Vector spaces
	6	23-Jan-20	Vector subspaces
	7	24-Jan-20	Sum and Direct sum of subspaces
3	8	27-Jan-20	Linearly Independent and dependent subsets of a vector space
	9	28-Jan-20	
	10	29-Jan-20	
	11	30-Jan-20	
4	12	31-Jan-20	Finitely generated vector space
	13	03-Feb-20	Existence theorem for basis of a finitely generated vector space
	14	04-Feb-20	Finite dimensional vector spaces
	15	05-Feb-20	
	16	06-Feb-20	
	17	07-Feb-20	
18	10-Feb-20		
19	11-Feb-20	Homomorphism and isomorphism of vector spaces	
5	20	12-Feb-20	Linear transformations and linear forms on vector spaces
	21	13-Feb-20	
	22	14-Feb-20	
6	23	17-Feb-20	Dual Spaces
	24	18-Feb-20	Bidual spaces
	25	19-Feb-20	Test
	26	20-Feb-20	Annihilator of subspaces of finite dimensional vector spaces
	27	24-Feb-20	Null Space
7	28	25-Feb-20	Range space of a linear transformation
	29	26-Feb-20	Rank and Nullity Theorem
	30	27-Feb-20	Algebra of Linear Transformation
	31	28-Feb-20	
32	02-Mar-20		
33	03-Mar-20		
8	34	04-Mar-20	Singular and non-singular linear transformations
	35	05-Mar-20	Matrix of a linear Transformation
	36	06-Mar-20	Change of basis
	37	09-Mar-20	Eigen values and Eigen vectors of linear transformations
38	11-Mar-20		
39	12-Mar-20		
9	40	13-Mar-20	Inner product spaces
	41	16-Mar-20	Cauchy-Schwarz inequality
	42	17-Mar-20	Orthogonal vectors
	43	18-Mar-20	
	44	19-Mar-20	
45	20-Mar-20		
46	23-Mar-20		
11	47	24-Mar-20	Bessel's inequality for finite dimensional vector spaces
	48	25-Mar-20	Test
	49	26-Mar-20	Gram Schmidt
	50	27-Mar-20	Orthogonalization process
51	30-Mar-20		
52	31-Mar-20		
53	01-Apr-20		
12	54	03-Apr-20	Adjoint of a linear transformation and its properties
	55	06-Apr-20	Unitary linear transformations
	56	07-Apr-20	Revision
	57	08-Apr-20	
58	09-Apr-20		
59	10-Apr-20		
13	60	13-Apr-20	Revision
	61	14-Apr-20	
	62	15-Apr-20	
	63	16-Apr-20	
	64	17-Apr-20	
14	20th - 24th April 20	Final Sessional Test	

RPS Degree College, Balana (Mahendergarh)			
			
C : B.Sc NM 6th semester , Sec B			
Subject: Real and Complex Analysis			
Name of the Faculty : Mr. AJAY SINGH			
Week	Lecture	Date	Topics
1	7	16/01/20 to 24/01/20	Jacobians Depends Function
2	5	27/01/20 to 31/01/20	Beta Function And it's properties
3	5	03/02/20 to 07/02/20	Gama Function And it's properties
4	5	10/02/20 to 14/02/20	Double Integral
5	5	17/02/20 to 21/02/20	Triple Integral
6	1st Class Test		
7	5	24/02/20 to 28/02/20	Dirichlets integrals
8	5	02/03/20 to 06/03/20	change of order of integration in double integrals
9	5	09/03/20 to 13/03/20	Rivision And About Fourier's Series
10	2nd Class Test		
11	5	16/03/20 to 20/03/20	Fourier expansion of piecewise monotonic functions
12	5	23/03/20 to 27/03/20	Properties of Fourier Co-efficient
13	5	06/04/20 to 10/04/20	Dirichlet's conditions, Parseval's identity for Fourier series
14	5	30/03/20 to 03/04/20	Fourier series for even and odd functions
15	5	13/04/20 to 17/04/20	Half range series, Change of Intervals
16	Final Sessional Test		

RPS Degree College, Balana (Mahendergarh)			
Class and Section: B.Sc(N.M.) 6th semester section E			
Subject: Real and Complex Analysis			
Name of the Faculty : Mr. Rohit			
Week	Lecture	Date	Topics
1	7	16/01/20 to 24/01/20	Basics of partial derivatives, Definition of Jacobians and Jacobians of functions with respect to two or more variables
2	5	27/01/20 to 31/01/20	problems of Jacobians
3	5	03/02/20 to 07/02/20	Beta and Gamma functions and related problem
4	5	10/02/20 to 14/02/20	Double and Triple integral problem and application
5	5	17/02/20 to 21/02/20	Double and triple integral continue, Fourier series
6			1st Class Test
			Fourier series continue and Half range sin, cosine series

7	5	24/02/20 to 28/02/20					
8	5	02/03/20 to 06/03/20	Parsevals identity for Fourier series and Stereographic projection of complex number				
9	5	09/03/20 to 13/03/20	Continuity and Differentiability of complex functions				
10							
11	5	16/03/20 to 20/03/20	Analytic function ,Cauchy Riemann equation				
12	5	23/03/20 to 27/03/20	Harmonic functions, Mapping of elementary functions				
13	5	06/04/20 to 10/04/20	Mappings Rotation, Reflection, Magnification, Inversion, Conformal mapping				

14	5	30/03/20 to 03/04/20	Mobius transformation, Fixed points				
15	5	13/04/20 to 17/04/20	Cross section, Inverse points, Critical mappings				
16			Final Sessional Test				



RPS Degree College, Balana (Mahendergarh)

Lesson Plan

2019-20 (Even Semester)

Class and Section: B.Sc 6th (Non Medical) A

Subject: Organic chemistry

Name of the Faculty : Muhammad Mustafa

Week	Lecture	Date	Topics
1	1	20-Jan-20	Inteoduction to the syllabus Heterocyclic Compounds-I
	2	24-Jan-20	Methods of synthesis of Pyrrole and reacriions of pyrrole
2	3	27-Jan-20	Methods of synthesis of Furan and thiophene and their reactions
	4	31-Jan-20	Reactions of furan and thiophene
3	5	03-Feb-20	Mechanism of nucleophilic substitution reactions in pyridine derivatives.
	6	07-Feb-20	Comparison of basicity of pyridine, piperidine and pyrrole
4	7	10-Feb-20	Previous year questions and doubt class. Section B Heterocyclic Compounds-II Introduction to condensed five and six- membered heterocycle
	8	14-Feb-20	Preparation and reactions of indole, quinoline and isoquinoline with special reference to Fisher indole synthesis, Skraup synthesis and Bischler-Napieralski synthesis.
5	9	17-Feb-20	Mechanism of electrophilic substitution reactions of Indole Quinoline and Isoquinoline
6	22/2/2020		1st Class Test
7	10	24-Feb-20	2. Organosulphur Compounds Nomenclature, structural features, Methods of formation and chemical reactions of thiols, thioethers, sulphonic acids
	11	28-Feb-20	Synthetic detergents alkyl and aryl sulphonates.
8	12	02-Mar-20	Acidity of α -hydrogens, alkylation of diethyl malonate and ethyl acetoacetate. Synthesis
	13	06-Mar-20	The Claisen condensation. Keto-enol tautomerism of ethyl acetoacetate.
9	14	09-Mar-20	Addition or chain-growth polymerization. Free radical vinyl polymerization, ionic vinyl
	15	13-Mar-20	Condensat ion or step growth polymerization. Polyeste rs ,polyamides, phenol
10	3/16/2020		2nd Class Test
11	16	20-Mar-20	Urea formaldehyde resins, epoxy resins and polyurethanes. Natural and synthetic rubbers.
	17	23-Mar-20	Amino Acids, Peptides& Proteins
12	18	27-Mar-20	. Preparation of α -amino acids. Structure and nomenclature of peptides and proteins. Classification of proteins. Peptide structure determination, end group analysis,
	19	31-Mar-20	Selective hydrolysis of peptides. Classical peptide synthesis, solid- phase peptide synthesis.
13	20	03-Apr-20	Structures of peptides and proteins: Primary & Secondary structure.
16			Final Sessional Test
17			



Class and Section: B.sc NM 6th sem 'A'

Subject: Physical chemistry

Name of the Faculty : Gajal

Week	Lecture	Date	Topics
1	1	20-Jan-20	Introduction of syllabus.
	2	21-Jan-20	Sec:A-ELECTRONIC SPECTRUM::concept of potential energy curves for bonding and anti bonding orbitals, selection rules.
2	3	27-Jan-20	Franck condon principle,qualitative description of sigma and pi and n molecular orbital(MO),their energy level and respective transitions.
3	4	28-Jan-20	Sec:B-PHOTOCHEMISTRY:: intraction of raditions with matter,difference between thermal and photochemical process.
	5	03-Feb-20	Laws of photochemistry: Grothuss Drapper law, Stark-Enstein law.
4	6	04-Feb-20	Jablonski diagram, qualitative discription of fluorescence, phosphorescence.
	7	10-Feb-20	Non-radiative process (internal conversion,intersystem crossing).
5	8	11-Feb-20	Quantum yield, photosensitized reactions- energy transfer processes (some example).
	9	17-Feb-20	Revision of section A and B.
6	10.	18-Feb-20	1st Class Test
7	11	24-Feb-20	Sec:C-DILUTE SOLUTIONS ANDCOLLIGATIVE PROPERTIES:: ideal and non ideal solutions,methods of expressing concentration of solutions, activity and activity coefficient.
	12	25-Feb-20	dilute solutions, colligative properties, Raoult's law.
8	13	02-Mar-20	relative lowering of vapour pressure, molecular weight determination.
	14	03-Mar-20	osmosis law of osmotic pressure and its measurement,determination of molecular weight from osmotic pressure.
9	15	09-Mar-20	elevation in boiling point and depression in freezing point,thermogdyanamic realtion between mol.wt and elevation in boiling point and depression in freezing point.
	16	10-Mar-20	Holiday.
10	17.	16-Mar-20	2nd Class Test
11	18	17-Mar-20	experimental methods for determining various colligative properties, abnormal molar mass,degree of dissociation and association of solute.
	19	23-Mar-20	Sec:D- PHASE EQUILIBRIUM:: statement and meaning of the terms- phase component and degree of freedom.
12	20	24-Mar-20	thermodynamic derivation of Gibbs phase rule, phase equilibria of one component system- water and sulphur system.
	21	30-Mar-20	phase equilibria of two component system, solid liquid equilibria.
13	22	31-Mar-20	simple eutectic,example Pb-Ag system, desilverization of lead.
	23	06-Apr-20	revision of syllabus.
14			revisin of syllabus.
15			
16			
17			Final Sessional Test

RPS Degree College, Balana (Mahendergarh)

Class and Section: B.Sc VI 6NM B

Subject- Inorganic Chemistry

Name of the Faculty : Dr. Prashant Kumar

Week	Lecture	Date	Topics
1	1	20-Jan-20	Introduction of syllabus.
	2	21-Jan-20	Basics of organometallic chemistry
2	3	27-Jan-20	Classification of organometallic compounds
3	4	28-Jan-20	Nomenclature of organometallic compounds
	5	03-Feb-20	Preparation of organometallic compounds
4	6	04-Feb-20	Bonding of organometallic compounds
	7	10-Feb-20	Mononuclear carbonyl and nature of bonding in metal carbonyl
5	8	11-Feb-20	Metal ethylenic complex
	9	17-Feb-20	Revision
6	18-Feb-20		1st Class Test
7	11	24-Feb-20	Acids and bases concept
	12	25-Feb-20	Arrhenius, Bronsted Lowry and Lux-Flood concept
8	13	02-Mar-20	Solvent system, concept of hard and soft acids and bases
	14	03-Mar-20	Lewis concept of acids and bases, symbiosis
9	15	09-Mar-20	Relative strength of acids and bases, electronegativity and hardness and softness
	16	10-Mar-20	Holiday.
10	16-Mar-20		2nd Class Test
11	18	17-Mar-20	Essential and trace elements in biological processes
	19	23-Mar-20	Hemoglobin and myoglobin
12	20	24-Mar-20	Biological role of alkali and alkaline earth metals, nitrogen fixation
	21	30-Mar-20	Silicones, preparation and properties, structure and uses
13	22	31-Mar-20	Phosphazenes preparation, properties, structure and uses
	23	06-Apr-20	revision
16			Final Sessional Test

RPS Degree College, Balana (Mahendergarh)

Lesson Plan

2019-20 (Even Semester)

Class and Section: B.Sc 6th (NON Medical) B

Subject: Organic chemistry

Name of the Faculty : Muhammad Mustafa

Week	Lecture	Date	Topics
1	1	20-Jan-20	Inteoduction to the syllabus Heterocyclic Compounds-I
	2	24-Jan-20	Methods of synthesis of Pyrrole and reactions of pyrrole
2	3	27-Jan-20	Methods of synthesis of Furan and thiophene and their reactions
	4	31-Jan-20	Reactions of furan and thiophene
3	5	03-Feb-20	Mechanism of nucleophilic substitution reactions in pyridine derivatives.
	6	07-Feb-20	Comparison of basicity of pyridine, piperidine and pyrrole
4	7	10-Feb-20	Previous year questions and doubt class. Section B Heterocyclic Compounds-II Introduction to condensed five and six- membered heterocycle
	8	14-Feb-20	Preparation and reactions of indole, quinoline and isoquinoline with special reference to Fisher indole synthesis, Skraup synthesis and Bischler-Napieralski synthesis.
5	9	17-Feb-20	Mechanism of electrophilic substitution reactions of Indole Quinoline and Isoquinoline
6	22/2/2020		1st Class Test
7	10	24-Feb-20	Nomenclature, structural features, Methods of formation and chemical reactions of thiols, thioethers, sulphonic acids
	11	28-Feb-20	Methods of formation and chemical reactions of sulphonamides and sulphaguanidine. Synthetic detergents alkyl and aryl sulphonates.
8	12	02-Mar-20	Acidity of -hydrogens, alkylation of diethyl malonate and ethyl acetoacetate. Synthesis of ethyl acetoacetate.
	13	06-Mar-20	The Claisen condensation. Keto-enol tautomerism of ethyl acetoacetate.
9	14	09-Mar-20	Addition or chain-growth polymerization. Free radical vinyl polymerization, ionic vinyl polymerization,
	15	13-Mar-20	Condensation or step growth polymerization. Polyesters, polyamides, phenol formaldehyde resins.
10	3/16/2020		2nd Class Test
11	16	20-Mar-20	Urea formaldehyde resins, epoxy resins and polyurethanes. Natural and synthetic rubbers.
	17	23-Mar-20	Amino Acids, Peptides & Proteins
12	18	27-Mar-20	Preparation of α -amino acids. Structure and nomenclature of peptides and proteins. Classification of proteins. Peptide structure determination, end group analysis,
	19	31-Mar-20	Selective hydrolysis of peptides. Classical peptide synthesis, solid-phase peptide synthesis.
13	20	03-Apr-20	Structures of peptides and proteins: Primary & Secondary structure.
	21	06-Apr-20	
14			
15			
16	Final Sessional Test		
17			

RPS Degree College, Balana (Mahendergarh)

Lesson Plan for even semester(2019-2020).

Class and Section: B.sc NM 6th sem 'B'

Subject: Physical chemistry

Name of the Faculty : Kiran yadav

Week	Lecture	Date	Topics
1	1	20-Jan-20	Introduction of syllabus.
	2	22-Jan-20	Sec-A: ELECTROIC SPECTRUM:: Concept of potential energy curve for bonding and antibonding molecular orbitals, selection rules.
2	3,4	27/1/20-29/1/20	Franck condon principle,qualitative description of sigma and pi and n molecular orbital(MO),their energy level and respective transitions.
3	5	03-Feb-20	Sec-B-PHOTOCHEMISTRY:: intraction of raditions with matter,difference between thermal and photochemical process.
	6	05-Feb-20	Laws of photochemistry: Grothus Drapper law, Stark-Einstein law.
4	7	10-Feb-20	Jablonski diagram, qualitative discription of fluorecence, phosphorescence.
	8	12-Feb-20	Non-radiative process (internal conversion,intersystem crossing).
5	9	17-Feb-20	Quantum yield, photosensitized reactions- energy transfer processes (some example).
	10	19-Feb-20	Revision of section A and B.
6	11,12	24/2/20-28/2/20	1st Class Test
7	13	02-Mar-20	Sec-C-DILUTE SOLUTIONS ANDCOLLIGATIVE PROPERTIES:: ideal and non ideal solutions,methods of expressing concentration of solutions, activity and activity coefficient.
	14	04-Mar-20	dilute solutions, colligative properties, Raoult's law.
8	15	09-Mar-20	relative lowering of vapour pressure, molecular weight determination.
	16	11-Mar-20	thermodynamic derivation of relation between elevation in boiling point and molar weight and depression in freezing point.
9	17	16-Mar-20	Osmosis law of osmotic pressure and its measurement,determination of molecular weight from osmotic pressure.
	18	18-Mar-20	elevation in boiling point,depression in freezing point.
10	19,20,	23/3/20- 27/3/20	2nd Class Test
11	21	30-Mar-20	experimental methods for determining various colligative properties, abnormal molar mass,degree of dissociation and association of solute.
	22	01-Apr-20	Sec-D- PHASE EQUILIBRIUM:: statement and meaning of the terms- phase component and degree of freedom.
12	23	06-Apr-20	thermodynamic derivation of Gibbs phase rule, phase equilibria of one component system- water and sulphur system.
	24	08-Apr-20	phase equilibria of two component system, solid liquid equilibria.
13	25	13-Apr-20	simple eutectic,example Pb-Ag system, desilverization of lead.
	26	15-Apr-20	revision of syllabus.
			Final Sessional Test



RPS Degree College, Balana (Mahendergarh)

Lesson Plan

2019-20 (Even Semester)

Class and Section: B.Sc. (Non Medical) 6th Sem. (C)

Subject: Inorganic Chemistry

Name of the Faculty : Ms. Sapna

Week	Lecture	Date	Topics
1	1	16-Jan-20	
	2	17-Jan-20	
	3	20-Jan-20	Organometallic Chemistry: Definition, classification of organometallic compounds.
	4	21-Jan-20	
	5	22-Jan-20	Nomenclature
	6	23-Jan-20	
	7	24-Jan-20	
2	8	27-Jan-20	Preparation, properties, and bonding of alkyls of Li
	9	28-Jan-20	
	10	29-Jan-20	Preparation, properties, and bonding of alkyls of Al
	11	30-Jan-20	
	12	31-Jan-20	
3	13	03-Feb-20	Preparation, properties, and bonding of alkyls of Hg, and Sn
	14	4-Feb-20	
	15	05-Feb-20	Metal-ethylene complexes
	16	6-Feb-20	
	17	07-Feb-20	
4	18	10-Feb-20	Mononuclear carbonyls and the nature of bonding in metalcarbonyls.
	19	11-Feb-20	
	20	12-Feb-20	HSAB Concept: Arrhenius, Bronsted-Lowry, the Lux-Flood
	21	13-Feb-20	
	22	14-Feb-20	
5	23	17-Feb-20	Solvent system and Lewis concepts of acids & bases
	24	18-Feb-20	
	25	19-Feb-20	1st Class Test
	26	20-Feb-20	
6	27	24-Feb-20	Relative strength of acids & bases
	28	25-Feb-20	
	29	26-Feb-20	Concept of Hard and Soft Acids & Bases
	30	27-Feb-20	
	31	28-Feb-20	
7	32	02-Mar-20	Symbiosis, electronegativity and hardness and softness
	33	3-Mar-20	
	34	04-Mar-20	Bioinorganic Chemistry Essential and trace elements in biological processes, metalloporphyrins
	35	5-Mar-20	
8	36	6-Mar-20	
	37	9-Mar-20	Haemoglobin and myoglobin
	38	11-Mar-20	Biological role of alkali and alkaline earth metal ions with special reference to Ca ²⁺
	39	12-Mar-20	
9	40	13-Mar-20	
	41	16-Mar-20	Nitrogen fixation
	42	17-Mar-20	
	43	18-Mar-20	Silicones: preparation, properties
	44	19-Mar-20	
10	45	20-Mar-20	
	46	23-Mar-20	2nd Class Test
	47	24-Mar-20	
	48	25-Mar-20	Silicones: structure and uses
	49	26-Mar-20	
11	50	27-Mar-20	
	51	30-Mar-20	Phosphazenes: preparation, properties
	52	31-Mar-20	
	53	01-Apr-20	Phosphazenes: structure
12	54	3-Apr-20	
	55	06-Apr-20	Phosphazenes: uses
	56	07-Apr-20	
	57	08-Apr-20	Phosphazenes: properties
	58	09-Apr-20	
13	59	10-Apr-20	
	60	13-Apr-20	Revision
	61	14-Apr-20	
	62	15-Apr-20	Revision
14	63	16-Apr-20	
	64	17-Apr-20	
	20-Apr-2020 to 24-Apr-2020		Final Sessional Exam

Lesson Plan

Class and Section: B.Sc 6th (Non Me

Subject: Organic chemistry

Name of the Faculty : Muhammad M


Week	Lecture	Date
1	1	20-Jan-20
	2	24-Jan-20
2	3	27-Jan-20
	4	31-Jan-20
3	5	03-Feb-20
	6	07-Feb-20
4	7	10-Feb-20
	8	14-Feb-20
5	9	17-Feb-20
6	22/2/2020	
7	10	24-Feb-20
	11	28-Feb-20
8	12	02-Mar-20
	13	06-Mar-20
9	14	09-Mar-20
	15	13-Mar-20
10	3/16/2020	
11	16	20-Mar-20
	17	23-Mar-20
12	18	27-Mar-20
	19	31-Mar-20
13	20	03-Apr-20
	21	06-Apr-20
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Semester)

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Topics
Inteoduction to the syllabus
Heterocyclic Compounds-I
Methods of synthesis of Pyrrole and reacrions of pyrrole
Methods of synthesis of Furan and thiophene and their reactions
Reactions of furan and thiophene
Mechanism of nucleophilic substitution reactions in pyridine derivatives.
Comparison of basicity of pyridine, piperidine and pyrrole
Previous year questions and doubt class. Section B Heterocyclic Compounds-II
Introduction to condensed five and six- membered heterocycle
Prepration and reactions of indole, quinoline and isoquinoline with special reference to Fisher indole synthesis, Skraup synthesis and Bischler-Napieralski synthesis.
Mechanism of electrophilic substitution reactions of Indole Quinoline and Isoquinoline
1st Class Test
Nomenclature, structural features, Methods of formation and chemical reactions of thiols, thioethers, sulphonic acids
Methods of formation and chemical reactions of sulphonamides and sulphaguanidine. Synthetic detergents alkyl and aryl sulphonates.
Acidity of -hydrogens, alkylation of diethyl malonate and ethyl acetoacetate. Synthesis of ethyl acetoacetate:
The Claisen condensation. Keto-enol tautomerism of ethyl acetoacetate.
Addition or chain-growth polymerization. Free radical vinyl polymerization, ionic vinyl polymerization,
Condensat ion or step growth polymerization. Polyeste rs ,polyamides, phenol formaldehyde resins,
2nd Class Test
Urea formaldehyde resins, epoxy resins and polyurethanes. Natural and synthetic rubbers.
Amino Acids, Peptides& Proteins
. Preparation of -amino acids.Structure and nomenclature of peptides and proteins. Classification of proteins. Peptide structure determination, end group analysis,
Selective hydrolysis of peptides. Classical peptide synthesis, solid- phase peptide synthesis.
Structures of peptides and proteins: Primary & Secondary structure.
Final Sessional Test

 RPS Degree College, Balana (Mahendergarh)			
Lesson Plan			
Class and Section: B.Sc. Non Medical 6 th Sem. C			
Subject: Physical Chemistry			
Name of the Faculty : Dr. Rajesh Kumar Dhiman			
Week	Lecture	Date	Topics
1	1	23.01.2020	Interaction of radiation with matter, difference between thermal and photochemical processes
	2	24.01.2020	Laws of photochemistry: Grothaus-Drapper law, Stark- Einstein law (law of photochemical equivalence)
2	3	30.01.2020	Jablonski diagram depicting various processes occurring in the excited state
	4	31.01.2020	qualitative description of fluorescence, phosphorescence, non-radiative processes (internal conversion, intersystem crossing)
3	5	06.02.2020	quantum yield
	6	07.02.2020	photosensitized reactions-energy transfer processes (simple examples)
4	7	13.02.2020	Ideal and non-ideal solutions, methods of expressing concentrations of solutions
	8	14.02.2020	activity and activity coefficient
5	9	20.02.2020	Dilute solution, Colligative properties, Raoult's law
1st Class Test			
	10	21.02.2020	Holiday
6	11	27.02.2020	relative lowering of vapour pressure, molecular weight determination, Osmosis law of osmotic pressure and its measurement
	12	28.02.2020	determination of molecular weight from osmotic pressure
7	13	05.03.2020	Elevation of boiling point and depression of freezing point
	14	06.03.2020	Thermodynamic derivation of relation between molecular weight and elevation in boiling point and depression in freezing point
8	15	12.03.2020	Experimental methods for determining various colligative properties
	16	13.03.2020	Abnormal molar mass
9	17	19.03.2020	degree of dissociation and association of solutes
	18	20.03.2020	Revision
10	19	26.03.2020	Revision
2nd Class Test			
	20	27.03.2020	Statement and meaning of the terms – phase component and degree of freedom
11	21	02.04.2020	Holiday
	22	03.04.2020	thermodynamic derivation of Gibbs phase rule, phase equilibria of one component system
12	23	09.04.2020	water and Sulphur systems. Phase equilibria of two component systems solid-liquid equilibria
	24	10.04.2020	simple eutectic Example Pb-Ag system, desilverisation of lead
13	25	16.04.2020	qualitative description of selection rules and Franck- Condon principle
	26	17.04.2020	Qualitative description of sigma and pi and n molecular orbital (MO) their energy level and respective transitions.
Final Sessinol Examination			

Lesson Plan

Class and Section: B.Sc 6th (NM) D

Subject: Organic chemistry

Name of the Faculty : Hitesh Gupta

Week	Lecture	Date	Topics
1	1	22-Jan-20	Introduction to the syllabus Heterocyclic Compounds-I
	2	24-Jan-20	Methods of synthesis of Pyrrole and reactions of pyrrole
2	3	29-Jan-20	Methods of synthesis of Furan and thiophene and their reactions
	4	31-Jan-20	Reactions of furan and thiophene
3	5	05-Feb-20	Mechanism of nucleophilic substitution reactions in pyridine derivatives.
	6	07-Feb-20	Comparison of basicity of pyridine, piperidine and pyrrole
4	7	12-Feb-20	Previous year questions and doubt class. Section B Heterocyclic Compounds-II Introduction to condensed five and six- membered heterocycle
	8	14-Feb-20	Preparation and reactions of indole, quinoline and isoquinoline with special reference to Fisher indole synthesis, Skraup synthesis and Bischler-Napieralski synthesis.
5	9	19-Feb-20	Mechanism of electrophilic substitution reactions of Indole Quinoline and Isoquinoline
6	22/2/2020		1st Class Test
7	10	26-Feb-20	Nomenclature, structural features, Methods of formation and chemical reactions of thiols, thioethers, sulphonic acids
	11	28-Feb-20	Methods of formation and chemical reactions of sulphonamides and sulphaguanidine. Synthetic detergents alkyl and aryl sulphonates.
8	12	04-Mar-20	Acidity of α -hydrogens, alkylation of diethyl malonate and ethyl acetoacetate. Synthesis of ethyl acetoacetate.
	13	06-Mar-20	The Claisen condensation. Keto-enol tautomerism of ethyl acetoacetate.
9	14	11-Mar-20	Addition or chain-growth polymerization. Free radical vinyl polymerization, ionic vinyl polymerization,
	15	13-Mar-20	Condensation or step growth polymerization. Polyesters, polyamides, phenol formaldehyde resins,
10	3/18/2020		2nd Class Test
11	16	20-Mar-20	Urea formaldehyde resins, epoxy resins and polyurethanes. Natural and synthetic rubbers.
	17	25-Mar-20	Amino Acids, Peptides & Proteins
12	18	27-Mar-20	Preparation of α -amino acids. Structure and nomenclature of peptides and proteins. Classification of proteins. Peptide structure determination, end group analysis,
	19	01-Apr-20	Selective hydrolysis of peptides. Classical peptide synthesis, solid-phase peptide synthesis.
13	20	03-Apr-20	Structures of peptides and proteins: Primary & Secondary structure.
	21	08-Apr-20	
14			
15			
16			Final Sessional Test
17			

RPS Degree College, Balana (Mahendergarh)

Lesson Plan for even semester(2019-2020).

Class and Section: B.sc NM 6th sem 'D'

Subject: Physical chemistry

Name of the Faculty : Kiran yadav

Week	Lecture	Date	Topics
1	1	22-Jan-20	Introduction of syllabus.
	2	23-Jan-20	Sec-A: ELECTROIC SPECTRUM:: Concept of potential energy curve for bonding and antibonding molecular orbitals, selection rules.
2	3,4	29/1/20-30/1/20	Franck condon principle,qualitative description of sigma and pi and n molecular orbital(MO),their energy level and respective transitions.
3	5	05-Feb-20	Sec:B-PHOTOCHEMISTRY:: intraction of raditions with matter,difference between thermal and photochemical process.
	6	06-Feb-20	Laws of photochemistry: Grotthus Drapper law, Stark-Einstein law.
4	7	12-Feb-20	Jablonski diagram, qualitative discription of fluorecence, phosphorescence.
	8	13-Feb-20	Non-radiative process (internal conversion,intersystem crossing).
5	9	19-Feb-20	Quantum yield, photosensitized reactions- energy transfer processes (some example).
	10	20-Feb-20	Revision of section A and B.
6	11,12	24/2/20-28/2/20	1st Class Test
7	13	04-Mar-20	Sec:C-DILUTE SOLUTIONS ANDCOLLIGATIVE PROPERTIES:: ideal and non ideal solutions,methods of expressing concentration of solutions, activity and activity coefficient.
	14	05-Mar-20	dilute solutions, colligative properties, Raoult's law.
8	15	11-Mar-20	relative lowering of vapour pressure, molecular weight determination.
	16	12-Mar-20	thermodyanamic derivation of relation between elevation in boiling point and molar weight and depression in freezing point.
9	17	18-Mar-20	Osmosis law of osmotic pressure and its measurement,determination of molecular weight from osmotic pressure.
	18	19-Mar-20	elevation in boiling point,depression in freezing point.
10	19,20.	23/3/20- 27/3/20	2nd Class Test
11	21	01-Apr-20	experimental methods for determining various colligative properties, abnormal molar mass,degree of dissociation and association of solute.
	22	02-Apr-20	Sec:D- PHASE EQUILIBRIUM:: statement and meaning of the terms- phase component and degree of freedom.
12	23	08-Apr-20	thermodyanamic derivation of Gibbs phase rule, phase equilibria of one component system- water and sulphur system.
	24	09-Apr-20	phase equilibria of two component system, solid liquid equilibria.
13	25	15-Apr-20	simple eutectic,example Pb-Ag system, desilverization of lead.
	26	16-Apr-20	revision of syllabus.
14			
			Final Sessional Test

RPS Degree College, Balana (Mahendergarh)

Lesson Plan for even semester(2019-2020).

Class and Section: B.sc NM 6th sem 'E'

Subject: Physical chemistry

Name of the Faculty : Kiran yadav

Week	Lecture	Date	Topics
1	1	20-Jan-20	Introduction of syllabus.
	2	21-Jan-20	Sec-A: ELECTROIC SPECTRUM:: Concept of potential energy curve for bonding and antibonding molecular orbitals, selection rules.
2	3,4	27/1/20-28/1/20	Franck condon principle,qualitative description of sigma and pi and n molecular orbital(MO),their energy level and respective transitions.
3	5	03-Feb-20	Sec-B-PHOTOCHEMISTRY:: intraction of raditions with matter,difference between thermal and photochemical process.
	6	04-Feb-20	Laws of photochemistry: Grothus Drapper law, Stark-Enstein law.
4	7	10-Feb-20	Jablonski diagram, qualitative discription of fluorecence, phosphorescence.
	8	11-Feb-20	Non-radiative process (internal conversion,intersystem crossing).
5	9	17-Feb-20	Quantum yield, photosensitized reactions- energy transfer processes (some example).
	10	18-Feb-20	Revision of section A and B.
6	11,12	24/2/20-28/2/20	1st Class Test
7	13	02-Mar-20	Sec-C-DILUTE SOLUTIONS ANDCOLLIGATIVE PROPERTIES:: ideal and non ideal solutions,methods of expressing concentration of solutions, activity and activity coefficient.
	14	03-Mar-20	dilute solutions, colligative properties, Raoult's law.
8	15	09-Mar-20	elevation in boiling point and depression in freezing point,thermodyanamic derivation of relation between molar weight,elevation in boiling point and depression in freezing point.
	16	10-Mar-20	HOLIDAY.
9	17	16-Mar-20	Osmosis law of osmotic pressure and its measurement,determination of molecular weight from osmotic pressure.
	18	17-Mar-20	elevation in boiling point,depression in freezing point.
10	19,20.	23/3/20- 27/3/20	2nd Class Test
11	21	30-Mar-20	experimental methods for determining various colligative properties, abnormal molar mass,degree of dissociation and association of solute.
	22	31-Mar-20	Sec-D- PHASE EQUILIBRIUM:: statement and meaning of the terms- phase component and degree of freedom.
12	23	06-Apr-20	thermodyanamic derivation of Gibbs phase rule, phase equilibria of one component system- water and sulphur system.
	24	07-Apr-20	phase equilibria of two component system, solid liquid equilibria.
13	25	13-Apr-20	simple eutectic,example Pb-Ag system, desilverization of lead.
	26	14-Apr-20	revision of syllabus.
			Final Sessional Test