



# RPS Degree College, Balana (Mahendergarh)

I lan

2020-2021

**Class and Section: B.Sc Med. 3rd**

**Subject: Diversity of Microbes**

Lecture	Topics
1	Diversity in plant forms.
2	Diversity in plant forms.
3	Introduction to Tissues. Meristematic tissues.
4	Introduction to Tissues. Meristematic tissues.
5	Permanent tissues (Simple, Complex and Secretory)
6	Permanent tissues (Simple, Complex and Secretory)
7	The shoot system.
8	The shoot system.
9	Shoot apical meristem and its histological organization.
10	Shoot apical meristem and its histological organization.
11	Cambium Structure and Function
12	Cambium Structure and Function
13	Secondary growth in dicot stem: characteristics of growth rings.
14	Secondary growth in dicot stem: characteristics of growth rings.
15	Sap wood and heart wood.
16	Sap wood and heart wood.
17	Periderm.
18	Periderm.
19	Anamalous secondary growth.
20	Anamalous secondary growth.
21	Dracaena, Boerhaavia, and Acyranthes.
22	Dracaena, Boerhaavia, and Acyranthes.
23	Introduction to leaf, Types. Simple leaf.
24	Introduction to leaf, Types. Simple leaf.
25	Compound leaf.
26	Compound leaf.
27	Phyllotaxy.Epidermis.Uniseriate and multiseriate epidermis.
28	
29	Epidermal appendages and their morphological appendages.
30	Epidermal appendages and their morphological appendages.
31	Anatomy of typical Monocot

32	Anatomy of typical Monocot
33	Dicot leaf, cell inclusions in leaves
34	Dicot leaf, cell inclusions in leaves
35	Leaf abscission, Stomatal apparatus and their morphological types.
36	Leaf abscission, Stomatal apparatus and their morphological types.
37	Root system: Root apical meristem; histological organization.
38	Root system: Root apical meristem; histological organization.
39	Secondary growth in dicot root.
40	Secondary growth in dicot root.
41	Structural modifications in root: Storage Respiratory , Epiphytic
42	Structural modifications in root: Storage Respiratory , Epiphytic
43	Revision
44	Revision
45	Revision

Class and Section:..... <b>BSc Medical 3rd Sem</b>		
Subject:... <b>BOTANY- I</b>		
		<b>Topics</b>
	Day 1	Orientation Lecture
	Day 2	Introduction of Plant types
	Day 3	Whittaker's Classification
	Day 4	General characters of 5 Kingdoms
	Day 5	Introduction of Gymnosperms
	Day 6	General characteristics
	Day 7	External characteristics of Gymnosperms
	Day 8	Internal characteristics
	Day 9	Reproduction in Gymnosperms
	Day 10	Economic Importance as Timber wood
	Day 11	Economic Importance as Food, medicines & oils
	Day 12	Wood, Manoxylic & Pycnoxylic
	Day 13	Coralloid & Mycorrhizal roots
	Day 14	Pilger's & Melchoir's Classification
	Day 15	Different groups of gymnosperms
	Day 16	Gymnospermic seeds
	Day 17	Evolution of gymnosperms
	Day 18	Seed habits in Gymnosperms
	Day 19	Evolution of Seed Habits
	Day 20	Diversity of Gymnosperms
	Day 21	Distribution of Gymnosperms in India
	Day 22	Geological time scale
	Day 23	Climatic fluctuations
	Day 24	Paleozoic Era
	Day 25	Mesozoic Era
	Day 26	Coenozoic Era
	Day 27	Fossils & Regions containing fossils
	Day 28	Theories of Fossilization
	Day 29	Compression Fossils
	Day 30	Surface Fossils
	Day 31	Petrified Fossils
	Day 32	Other Fossils
	Day 33	Class Test Ist
	Day 34	Fossils Gymnosperms Introduction
	Day 35	<i>Lyginopteris</i>
	Day 36	<i>Leginostoma</i>
	Day 37	<i>Williamsonia</i>
	Day 38	Reproduction in <i>Williamsonia</i>
	Day 39	<i>Cycadeoidea</i>
	Day 40	<i>Cycadeoidea</i>
	Day 41	Strobili of <i>Cycadeoidea</i>
	Day 42	Unit Test
	Day 43	<i>Cycas</i> - " <i>Cycas is a living a fossil</i> "
	Day 44	Leat & its anatomy
	Day 45	Stem Anatomy & Secondary Growth of Stem
	Day 46	Reproduction in <i>Cycas</i> &Vegetative reproduction
	Day 47	Male cone of <i>Cycas</i> & Microsporangia
	Day 48	Megasporophyls

	Day 49	Formation of Megaspore
	Day 50	Development of Gametophytes
	Day 51	Archegonia & Fertilization
	Day 52	Embryogeny of <i>Cycas</i>
	Day 53	Seed structure in <i>Cycas</i>
	Day 54	Life Cycle of <i>Cycas</i>
	Day 55	Economic Importance of <i>Cycas</i>
	Day 56	Class Test 2nd
	Day 57	Sporophyte & Diagnostic Features of <i>Pinus</i>
	Day 58	Anatomy of Root & Secondary Growth of Root
	Day 59	Anatomy of Leaf
	Day 60	Long Shoot of <i>Pinus</i> & Dwarf shoot of <i>Pinus</i>
	Day 61	Unit Test
	Day 62	Stem Anatomy & Secondary Growth of Stem
	Day 63	Reproduction in <i>Pinus</i>
	Day 64	Male cone of <i>Pinus</i> & Microsporangia
	Day 65	Female cone of <i>Pinus</i> & Megasporangia
	Day 66	Formation of Megaspore
	Day 67	Development of Gametophytes
	Day 68	Archegonia & Fertilization
	Day 69	Embryogeny of <i>Pinus</i>
	Day 70	Seed structure in <i>Pinus</i>
	Day 71	Life Cycle of <i>Pinus</i>
	Day 72	Economic Importance of <i>Pinus</i>
	Day 73	Unit Test
	Day 74	Ephedra- Sporophyte
	Day 75	Anatomy of Root & Secondary Growth of Root
	Day 76	Anatomy of Leaf
	Day 77	Stem Anatomy & Secondary Growth of Stem
	Day 78	Reproduction in <i>Ephedra</i>
	Day 79	Male Flower & Microsporangia
	Day 80	Female Flower & Megasporangia
	Day 81	Formation of Megaspore
	Day 82	Class Test III
	Day 83	Development of Gametophytes
	Day 84	Archegonia & Fertilization
	Day 85	Embryogeny
	Day 86	Seed structure of <i>Ephedra</i>
	Day 87	Life Cycle of <i>Ephedra</i>
	Day 88	General characteristics of Angiosperms
	Day 89	Primitive Angiosperms
	Day 90	Magnoliales
	Day 91	Ranales
	Day 92	Primitive Genera of Angiosperms



































































































































































































































































































































































































































































































































































































































































































































































































































































































































































































































































































































































































































































































































































































































































































































































































































































































































































































































































































































































































































































































































































































































































































































































































































# RPS Degree College, Balana (Mahendergarh)

## Lesson Plan

2020-21(Odd Semester)

**Class and Section: B.Sc. Medical 3rd Sem.**

**Subject: Inorganic Chemistry**

Lecture	Topics
1	Introduction to Syllabus
2	Werner coordination theory
3	Werner coordination theory
4	Werner coordination theory
5	Effective Atomic Number
6	Effective Atomic Number
7	Effective Atomic Number
8	Effective Atomic Number
9	Nomenclature of Coordination compound
10	Nomenclature of Coordination compound
11	Nomenclature of Coordination compound
12	Nomenclature of Coordination compound
13	Nomenclature of Coordination compound
14	Isomerism in coordination compound
15	Isomerism in coordination compound
16	Isomerism in coordination compound
17	Isomerism in coordination compound
18	Valence bond theory
19	Valence bond theory
20	Valence bond theory
21	Valence bond theory
22	Physical properties of solvents
23	Physical properties of solvents
24	Physical properties of solvents
25	Types of solvents
26	Types of solvents
27	Reaction in liq NH <sub>3</sub> as a non aqueous solvent
28	Reaction in liq NH <sub>3</sub> as a non aqueous solvent
29	Reaction in liq NH <sub>3</sub> as a non aqueous solvent
30	Reaction in liq SO <sub>2</sub> as a non aqueous solvent
31	Reaction in liq SO <sub>2</sub> as a non aqueous solvent
32	Reaction in liq SO <sub>2</sub> as a non aqueous solvent
33	Reaction in liq SO <sub>2</sub> as a non aqueous solvent
34	Defination of transition elements , position in the periodic table
35	General Characteristic of first row transition elements

36	General Characteristic of first row transition elements
37	General Characteristic of first row transition elements
38	General Characteristic of first row transition elements
39	Structure and properties of TiO <sub>2</sub>
40	Structure and properties of TiO <sub>2</sub>
41	Structure and properties of VOCl <sub>2</sub>
42	Structure and properties of VOCl <sub>2</sub>
43	Structure and properties of FeCl <sub>3</sub>
44	Structure and properties of FeCl <sub>3</sub>
45	Structure and properties of CuCl <sub>2</sub>
46	Structure and properties of CuCl <sub>2</sub>
47	Structure and properties of Ni(CO) <sub>4</sub>
48	Structure and properties of Ni(CO) <sub>4</sub>



## RPS Degree College, Balana (Mahendergarh)

### Lesson Plan

Class : B.Sc. Medical 3rd Sem

Subject : Organic Chemistry

Lecture	Topics
1	Introduction of Syllabus
2	Alcohols Classification and nomenclature. Monohydric alcohols
3	Nomenclature, methods of formation by reduction of aldehydes
4	Ketones, carboxylic acids and esters.
5	Hydrogen bonding. Acidic nature.
6	Reactions of alcohols.
7	Dihydric alcohols — nomenclature,
8	methods of formation,
9	Chemical reactions of vicinal glycols, oxidative cleavage [ Pb(OAc) <sub>4</sub> and HIO <sub>4</sub> ]
10	Pinacol- pinacolone rearrangement
11	CLASS TEST
12	Phenols Nomenclature, structure and bonding
13	Preparation of phenols,
14	Physical properties and acidic character
15	Comparative acidic strengths of alcohols and phenols
16	Resonance stabilization of phenoxide ion.
17	Reactions of phenols — electrophilic aromatic substitution
18	Acylation and carboxylation.
19	Mechanisms of Fries rearrangement
20	Claisen rearrangement, Gatterman synthesis
21	ReimerTiemann reaction
22	Epoxides Nomenclature of ethers and methods of their formation
23	Physical properties
24	Synthesis of epoxides
25	Acid and base- catalyzed ring opening of epoxides
26	Orientation of epoxide ring opening,
27	Electrophilic and nucleophilic reagents
28	Reactions of Grignard and organolithium reagents with epoxides
29	REVISION OF SECTION B
30	CLASS TEST,
31	Carboxylic Acids& Derivatives
32	Nomenclature, structure and bonding, physical properties
33	Acidity of carboxylic acids
34	Preparation of carboxylic acids
35	Reactions of carboxylic acids. Hell- Volhard- Zelinsky reaction
36	Synthesis of acid chlorides, esters and amides
37	Reduction of carboxylic acids. Mechanism of decarboxylation

38	Nomenclature of acid chlorides, esters, amides (urea) and acid anhydrides
39	Relative stability of acyl derivatives.
40	<del>Physical properties, interconversion of acid derivatives by nucleophilic acyl substitution</del>
41	Preparation of carboxylic acid derivatives, chemical reactions
42	Mechanisms of esterification and hydrolysis (acidic and basic)
43	TEST OF SECTION C
44	<del>Ultraviolet (UV) absorption spectroscopy – absorption laws (Beer – Lambert law)</del>
45	Presentation and analysis of UV spectra, types of electronic transitions
46	<del>Chromophore and auxochrome. Bathochromic, hypsochromic, hyperchromic and hypochromic effects of structural shifts</del>
47	Woodward- Fieser rules, calculation of $\lambda_{max}$ - unsaturated ketones
48	<del>UV spectra of, aconjugated dienes and <math>\alpha,\beta</math>-unsaturated acids, <math>\alpha,\beta</math>-unsaturated aldehydes</del>
49	Revision
50	Revision



# RPS Degree College, Balana (Mahendergarh)

## Lesson Plan

2020-21(Odd Semester)

**Class and Section: B.Sc 3rd Sem Medical**

**Subject: Physical Chemistry**

Lecture	Topics
1	Introduction of thermodynamics
2	Definition of system and surrounding and types of system
3	Extensive and intensive properties
4	State and path function and their differential
5	Thermodynamic process
6	Concept of heat and work
7	Zeroth law of thermodynamics
8	First law of thermodynamics
9	Internal energy and enthalpy heat capacity
10	Heat capacity at constant volume and pressure and their relation
11	Joule Thomson effect
12	Joule Thomson Coefficient for ideal gas and enthalpy change
13	Joule Thomson Coefficient for real gas and inversion temperature
14	calculation of work heat change in internal energy and change in enthalpy in Isothermal reversible expansion of an ideal gas
15	Calculation of these quantities in adiabatic reversible expansion of an ideal gas
16	Relation between temperature volume and pressure in case of adiabatic expansion of an ideal gas
17	Temperature dependence of enthalpy
18	Kirchoff's equation
19	Bond energy
20	Bond energy
21	Applications of bond energy
22	Applications of bond energy
23	Introduction of chemical equilibrium
24	Equilibrium constant and free energy
25	Concept of chemical potential
26	Thermodynamic derivation of law of chemical equilibrium
27	Temperature dependence of equilibrium constant
28	Vant Hoff reaction isochore
29	Vant Hoff reaction isotherm
30	Le Chatelier Principle
31	applications
32	Clausius Clapeyron equation
33	Applications of clausius clapeyron equation

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

**Lesson Plan**

2020-21(Odd Semester)

**Class and Section:** B.Sc(Non Medical & Medical) 3rd Sem

**Subject:** Sanskrit

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(पाठ्यक्रम)

B.Sc. Non-Medical

B.Sc. Medical

(संस्कृत अनिवार्य)

तृतीय - सामान्य

पदमः भागः

प्रथमः कालांशः — वेद, उपनिषद् सम्बन्धिनः सामान्य ज्ञानं पाठानुसारं।

द्वितीयः कालांशः — 'ईशस्तवः' पाठस्य पञ्च श्लोकाः सम्पूर्णाः व्याख्या सहितः।

तृतीयः कालांशः — 'वयं त्वाम् भजामः' पाठः सम्पूर्णः व्याख्या सहितः।

चतुर्थः कालांशः — 'रामायण' सम्बन्धिनः सामान्य ज्ञानं।

पंचमः कालांशः — 'धर्मज्ञः रामः' पाठस्य सप्त श्लोकाः सम्पूर्णाः।  
पाठोऽपि सम्पूर्णः व्याख्या सहितः।

षष्ठः कालांशः — 'धर्मज्ञः रामः' पाठस्य सप्त श्लोकाः सम्पूर्णाः।  
पाठोऽपि सम्पूर्णः व्याख्या सहितः।

सप्तमः कालांशः — 'सुन्दरकाण्ड' सम्बन्धिनः सामान्य ज्ञानं पाठानुसारं।

अष्टमः कालांशः — 'साधुव्रतंचर' पाठस्य पञ्च श्लोकाः सम्पूर्णाः।  
व्याख्या सहितः।

नवमः कालांशः — 'साधुव्रतंचर' पाठस्य पञ्च श्लोकाः सम्पूर्णाः।  
व्याख्या सहितः। पाठोऽपि सम्पूर्णः।

दशमः कालांशः — ६ विभीषणस्य विलापः १ पाठस्य षष्ठः श्लोकाः सम्पूर्णाः  
व्याख्या सहितः ।

एकादशः कालांशः — ६ विभीषणस्य विलापः १ पाठस्य षष्ठः श्लोकाः सम्पूर्णाः  
व्याख्या सहितः ।

द्वादशः कालांशः — ६ विभीषणस्य विलापः १ पाठस्य षष्ठः श्लोकाः सम्पूर्णाः  
व्याख्या सहितः । पाठोऽपि सम्पूर्णः ।

त्रयोदशः कालांशः — ६ धिक् दारिद्र्यम् १ पाठस्य पञ्चः श्लोकाः सम्पूर्णाः

चतुर्दशः कालांशः — ६ धिक् दारिद्र्यम् १ पाठस्य अग्रे पञ्चः श्लोकाः  
व्याख्या सहितः सम्पूर्णाः ।

पंचदशः कालांशः — ६ धिक् दारिद्र्यम् १ पाठस्य अग्रे पञ्चः श्लोकाः  
सम्पूर्णाः ।

षोडशः कालांशः — ६ धिक् दारिद्र्यम् १ पाठस्य अग्रे पञ्चः श्लोकाः  
सम्पूर्णाः । पाठोऽपि सम्पूर्णः ।

सप्तदशः कालांशः —

( गद्यः भागः )

६ अनुशासन १ सम्बन्धिनः सामान्यः ज्ञानं ।  
पाठानुसारम् ।

अष्टादशः कालांशः -

८ अनुशासनम् १ पाठः सम्पूर्णः व्याख्या सहितः ।

नवदशः कालांशः -

८ आयुर्वेद १ सम्बन्धिनः सामान्यः ज्ञानं पाठानुसारं ।

विंशतिः कालांशः -

८ सद्वृत्तम् १ पाठः सम्पूर्णः व्याख्या सहितः ।

एकविंशतिः कालांशः -

८ बुद्धिर्भरस्य बलं तस्य १ पाठः सम्पूर्णः व्याख्या सहितः ।

द्वाविंशतिः कालांशः -

८ नीलवर्णः शृगालः १ पाठः सम्पूर्णः व्याख्या सहितः ।

त्रयोविंशतिः कालांशः -

८ शशकस्य चातुर्थम् १ पाठः सम्पूर्णः व्याख्या सहितः ।

चतुर्विंशतिः कालांशः -

८ बालक, कवि, साधु, जल १ शब्दरूपं सम्पूर्णः ।

पञ्चविंशतिः कालांशः -

८ मातृ, पितृ ('सर्व' त्रिषु लिंगेषु) शब्दरूपं सम्पूर्णम् ।

षड्विंशतिः कालांशः -

८ भू, अस्, वद् १ धातु सम्पूर्णः पञ्च लकारेषु ।

सप्तविंशतिः कालांशः -

८ गम्, पद्, स्था धातु सम्पूर्णः ।

अष्टाविंशतिः कालांशः -

दीर्घ, गुण, वृद्धि, यण् सान्धिः सम्पूर्णः उदाहरण सहितः ।

नवविंशतिः कालांशः -

अपादि, प्रकृतिभाव, पूर्वरूप, पररूप सान्धिः सम्पूर्णः उदाहरण सहितः ।

८ इति अलम् १



# RPS Degree College, Balana (Mahendergarh)

## Syllabus Plan

2020-21(Odd Semester)

**Class and Section:** B.Sc Medical 3rd Sem.

**Subject:**Diversity of Chordates -I (Zoology)

Lecture	Topics
1	Introduction to Syllabus, Scheme of Exam & Learning Objectives/Outcomes
2	Introduction to Chordates
3	Diversity of Chordates
4	Consevation Strategies
5	Chordate charactwers
6	Oigin of Chordates
7	Role of Amnion
8	Classification of Chordates
9	Evolutionary Tree of Chordates
10	Charters of Urochordates
11	Classification
12	Type study of Herdmania
13	Morphology
14	Digestive system
15	Respiratory system
16	Blood Circulation
17	Excretory system
18	Nervous system
19	Reproductive system
20	Afffinities
21	General characters of Cephalochordata
22	Biodiversity and Importance
23	Affinities
24	Type Study of Branchiostoma
25	Digestive system
26	Respiratory system
27	Excretory system
28	Nervous system
29	Reproductive system
30	Blood Circulation
31	Primitive Characters
32	General characters of Cyclostomata
33	Classification
34	Type study of Petromyzon
35	Morphology

36	Digestive system
37	Respiratory system
38	Blood Circulation
39	Excretory system
40	Nervous system
41	Reproductive system
42	Life History
43	Ammocoete Larva
44	Chondrichthyes
45	Osteichthyes
46	Economic Importance of Fishes
47	Type study of Labeo rohita
48	Morphology
49	Digestive system
50	Respiratory system
51	Blood Circulation
52	Nervous system
53	Reproductive system
54	Fins of Fishes
55	Scales of fishes
56	Continue
57	Parental care in Fishes
58	Migration in fishes
59	Continue
60	Revision.



# RPS Degree College, Balana (Mahendergarh)

## Syllabus Plan

2020-21(Odd Semester)

**Class and Section:** B.Sc Medical 3rd Sem

**Subject:** Mammalian Physiology 1 (Zoology)

Lecture	Topics
1	Introduction to Syllabus, Scheme of Exam & Learning Objectives/Outcomes
2	Introduction of Carbohydrates
3	Classification of Carbohydrates
4	Structure of Carbohydrates
5	Function and Properties of carbohydrates
6	Introduction of Lipids
7	Classification of lipids
8	Structure of lipids
9	Function and Properties of lipids
10	Introduction of Proteins
11	Classification of Proteins
12	Structure of Proteins
13	Function and Properties of Proteins
14	Nomenclature of Enzymes
15	Classification of Enzymes
16	Mechanism of Enzyme action
17	Passive Transport
18	Active transport
19	Buffers
20	Nutrition Components: Carbohydrates, fat, lipids
21	Nutrition Components: Vitamins, Minerals
22	Types of nutrition and feedings
23	Digestion of dietary constituents- lipids
24	Digestion of dietary constituents- Proteins , carbohydrates
25	Digestion of dietary constituents- Nucleic acid
26	Symbiotic digestion
27	Absorption of Nutrients
28	Assimilation
29	Control of Enzyme Secretion
30	Introduction , Structure and Types of muscle
31	Bio-Chemical and physical events during muscle contraction
32	Single muscle twitch ,tetanus, muscle fatigue
33	Muscle tone, oxygen debt
34	Cori cycle, Single unit smooth muscle
35	Physical and functional properties of muscle

36	Introduction, structure and types of bones
37	Classification of bones
38	Bone growth and resorption
39	effect of ageing on skeltal system
40	bone disorder
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