DEPARTMENT OF ZOOLOGY
ACADEMIC PLANNER-2024
1ST SEMESTER (odd semester)

Week/Month and Date (preferably)		Day	Portions Planned for 1 hour	Teacher
AUGUST	2nd week	1	UNIT III:Chapter 4: Helminthes Phylum Platyhelminthes: General characteristics of the phylum; classification up to classes (At least two unique characters for each class) with suitable examples.	Dr.CB
		2	Unit IV: Chapter 6 : **Phylum Mollusca:** General characteristics of the phylum; classification up to classes (At least two unique characters for each class) with suitable examples.	DL
		3	Unit I, Chapter 1: Concept and significance of taxonomy	RB
		4	Unit-I- chapter 1- Zoological classification- Uses, kinds of classification and Linnean hierarchy.	RB
	3rd week	1	Unit III: UNIT II:Chapter 4: Helminthes Phylum Platyhelminthes: General characteristics of the phylum; classification up to classes (At least two unique characters for each class) with suitable examples.	Dr. CB
		2	Unit IV: Chapter 6 : **Phylum**	DL

			Mollusca: General characteristics of the phylum; classification up to classes (At least two unique characters for each class) with suitable examples.	
		3	Unit I, Chapter 1 : Rules and Codes of binomial nomenclature. ICZN – features, code, ICZN rules, electronic publication.	**RB**
		4	Unit-I- chapter 1:Phylogenic tree- Features and types- Dendrogram, phenogram, cladogram, curvogram and phylogram. Significance of phylogram.	**RB**
SEPTEMBER	**4th week**	**1**	**UNIT III; Chapter 4: Annelids Phylum Annelida:** General characteristics of the phylum; classification up to classes (At least two unique characters for each class) with suitable examples.	**Dr. CB**
		2	Unit IV: Chapter 6 : Unio - morphology, respiratory system and life cycle.	**DL**
		3	Unit-I- chapter 1: Phylogenic tree- Features and types- Dendrogram, phenogram, cladogram, curvogram and phylogram. Significance of phylogram.	**RB**
		4	Unit-I- chapter 1Recent trends in taxonomy- bar coding life.	**RB**
	1st week	**1**	UNIT III chapter 4: Type study of Earthworm *(Pheretima posthuma)*- Morphology, digestive system, and excretory system.	**Dr. CB**
		2	Unit IV: Chapter 6 :*Unio* shell - sectional view.	**DL**

		3	Unit-I- chapter 1 Collection and preservation of natural history specimens.	**RB**
		4	Unit I Chapter 2: Introduction to Animal Architecture: Outline classification of Kingdom Animalia up to the level of phyla.	**RB**

Week/Month and Date (preferably)		Day	Portions Planned for 1 hour	Teacher
	2nd week	1	UNIT III chapter 4: Type study of Earthworm *(Pheretima posthuma)*- Morphology, digestive system, and excretory system.	**Dr. CB**
		2	Unit IV: Chapter 6 : Modification of the foot: *Chiton, Dentalium, Pila, Aplysia, Mytilus, Sepia* and Octopus	**DL**
		3	**Unit I Chapter 2:** Body organization: Levels of organization- Protoplasmic, cellular, tissue, and organ	**RB**
		4	**Unit I Chapter 2:** Body Symmetry - Definition and its types-asymmetry, spherical, radial, biradial and bi-lateral.	**RB**
SEPTEMBER	**3rd week**	1	Unit III, Chapter 4: Trochophore larva and its significance.	**Dr. CB**
		2	Unit IV: Chapter 6 :Modification of the foot: *Chiton, Dentalium, Pila, Aplysia, Mytilus, Sepia* and Octopus	**DL**
		3	**Unit I Chapter 2:** Germ layers – Definition and its types- Diploblastic (Apparent and absolute) and Triploblastic	**RB**
		4	**Unit I Chapter 2:** Body Coelom – Definition, origin and its types- a coelom, pseudo coelom, eucoelom (Enterocoelome and schizocoelom	**RB**
	4th week	1	Unit III Chapter5: Phylum Arthropoda: General characteristics of the phylum; classification up to classes (At least two unique characters for each class) with suitable examples.	**Dr. CB**
		2	Unit IV Chapter7: **Phylum Echinodermata:** General characteristics of the phylum; classification up to classes (At least two unique characters for each	**DL**

			class) with suitable examples.	
		3	**Unit I Chapter 2:** Metamerism - Definition and its types with suitable examples- pseudometamerism, true metamerism- homonomous and heteronomous	**RB**
		4	**Unit II Chapter 3:Phylum Protozoa:** General characteristics of the phylum; classification up to classes (At least two unique characters for each class) with suitable examples.	**RB**
OCTOBER	**1st week**	**1**	Unit III Chapter5: Phylum Arthropoda: General characteristics of the phylum; classification up to classes (At least two unique characters for each class) with suitable examples.	**Dr. CB**
		2	Unit IV Chapter7: **Phylum Echinodermata:** General characteristics of the phylum; classification up to classes (At least two unique characters for each class) with suitable examples.	**DL**
		3	**Unit I Chapter 3:**. Types of nutrition: Autotrophic, holozoic, saprozoic, holophytic and parasitic with an example for each.	**RB**
		4	**Unit I Chapter 3:**. Locomotion: Amoeboid (Walking movement and Sol-Gel theory) - *Amoeba*, *Euglena* – Flagellar and euglenoid, ciliary movement – *Paramecium*	**RB**

Week/Month and Date (preferably)	Day	Portions Planned for 1 hour		Teacher
2nd week	1	Unit III: Chapter 5: Peripatus: Affinities with Annelida and Arthropoda; systematic position.		**Dr. CB**
	2	Unit IV Chapter7:Asterias – morphology and Water vascular system		**DL**
	3	**Unit II Chapter 3:** Reproduction: Binary fission and conjugation in *Paramecium caudatum*; significance of conjugation		**RB**
	4	**Unit II Chapter 4** **Phylum Porifera:** General characteristics of the phylum; classification up to classes (At least two unique characters for each class) with suitable examples.		**RB**
3rd week	1	Unit III: Chapter 5: Respiratory organs: Gills, book gills, trachea and book lungs.		**Dr. CB**
	2	Unit IV : Chapter 7: Structure and significance of Echinoderm larvae: Bipinnaria, Echinopluteus, Auricularia		**DL**
	3	**Unit II Chapter 4:** *Sycon* - Morphology, T.S of body wall		**RB**
	4	**Unit II Chapter 4: Unit II Chapter 4:** Canal system and its evolution: Asconoid, Syconoid, Leuconoid and Rhagonoid types.		**RB**
4th week	1	Unit III: Chapter 5: Sense organs: Simple eye and compound eye		**Dr. CB**
	2	Unit IV : Chapter 7: Structure and significance of Echinoderm larvae: Bipinnaria, Echinopluteus, Auricularia.		**DL**
	3	**Unit II Chapter 4: Unit II Chapter 4:** Canal system and its evolution: Asconoid, Syconoid, Leuconoid and Rhagonoid types.		**RB**
	4	**Unit II Chapter 4:** Polymorphism with reference to *Halistemma*		**RB**

NOVEMBER	**1st week**	**1**	Unit III: Chapter 5: Metamorphosis in insects and its types.	**Dr. CB**
		2	Unit IV : Chapter 7: Structure and significance of Echinoderm larvae: Bipinnaria, Echinopluteus, Auricularia	**DL**
		3	**Unit II Chapter 4:**Coral reefs: Definition and its types	**RB**
		4	**Unit II Chapter 4:** Coral reefs: Definition and its types	**RB**
	2nd week	**1**	Unit III: Chapter 5: Neuro-endocrine regulation of metamorphosis in Bombyx mori.	**Dr. CB**
		2	Unit IV : Chapter 7Phylum Hemichordata: Balanoglossus: morphology Modification of the coelom Tornaria larva and its significance.	**DL**
		3	Unit II Chapter 4: Ctenophora – Salient features and its affinities.	**RB**
		4	Unit II chapter 4: Ctenophora – Salient features and its affinities.	**RB**
	3rd week	**1**	Unit III: Chapter 5: Neuro-endocrine regulation of metamorphosis in *Bombyx mori*.	**Dr. CB**
		2	Unit IV : Chapter 7**Phylum Hemichordata**: Balanoglossus: morphology Modification of the coelom, Tornaria larva and its significance.	**DL**
		3	SEMINAR	**RB**
		4	SEMINAR	**RB**
	4th week	**1**	REVISION	**Dr. CB**
		2	REVISION	**DL**
		3	REVISION	**RB**
		4		**RB**
DECEMBER	**1ST week**	**1**	*TEST*	**Dr. CB**
		2	TEST	**DL**
		3	TEST	**RB**
		4		**RB**

Name of the Department	**ZOOLOGY**	**Subject Title --**	**OPEN ELECTIVE**	
Semester	1	**Paper**	1	

Week/Month and Date (preferably)		**Day**	**Portions Planned for 1 hour**	**Teacher**
OCTOBER	**1st week**	**1**	Unit I sericulture: history and present status	**Dr.CB**
		2	Unit III: Chapter 5: Common fishes used for culture	**DL**
		3	Unit II: Chapter 3: Live stock management: Dairy: Introduction to common dairy animals	**RS**
	2nd week	**1**	Unit I sericulture: mulberry and Non mulberry species	**Dr. CB**
		2	Unit III: Chapter 5: Fishing crafts and gears	**DL**
		3	Unit II: Chapter 3: Techniques of dairy management	**RS**
	3rd week	**1**	Unit I sericulture: Mulberry cultivation	**Dr. CB**
		2	Unit III: Chapter 5: Ornamental fish culture	**DL**
		3	Unit II: Chapter 3 Types of dairy farming:	**RS**
	4th week	**1**	Unit I sericulture: Morphology and life cycle of Bombyx mori	**Dr. CB**
		2	Unit III: Chapter 5: Construction and maintenance of aquarium	**DL**
		3	Unit II: Chapter 3: Dairy: Advantages and limitations of dairy farming	**RS**

Name of the Department	**ZOOLOGY**	**Subject Title - -**	**Open elective**		
Semester	1	**Paper**	1		

Week/Month and Date		**Day**	**Portions Planned**			**Teacher**
(preferably)			**for 1 hour**			
	1st week	**1**	Unit I sericulture: silk worm rearing techniques, processing of cocoons			**Dr. CB**
		2	Unit III: Chapter 5: Modern techniques of fish seed production			**DL**
		3	Unit II: Chapter 3: Dairy: Cattle feeds , milk and milk products			**RS**
		1	Unit I sericulture: diseases of silk worm and pest control			**Dr. CB**
		2	Unit 3: Chapter:6: Prawn culture: Culture of fresh and marine prawns			**DL**
		3	Unit II: Chapter 3: Dairy: Cattle diseases			**RS**
NOVEMBER						
	3rd week	**1**	Unit I chapter 2: Apiculuture: Introduction and present status			**Dr. CB**
		2	Unit 3: Chapter:6: Prawn culture: Preparation of farms			**DL**
		3	Unit II: Chapter 3 : Poultry: Types of breeds			**RS**
		1	Unit I chapter 2: Apiculuture: species of honey bees in india			**Dr. CB**
		2	Unit 3: Chapter:6: Prawn culture: Preservation and processing of prawns			**DL**

	4th week	**3**	Unit II: Chapter 3 : Poultry: Rearing methods	**RS**	**2nd wee**

Name of the Department	**ZOOLOGY**	**Subject Title --**	**Open elective**		
Semester	1	**Paper**	1		

Week/Month and Date (preferably)		**Day**	**Portions Planned for 1 hour**		**Teacher**
	1st week	**1**	Unit I chapter 2: Apiculuture: Like cycle of Apis indica		**Dr. Cb**
		2	Unit 3: Chapter 7: Vermiculture:Scope of vermiculture and types of earthworm		**DL**
		3	Unit II: Chapter 3 : Poultry: Rearing methods		**RS**
	2nd week	**1**	Unit I chapter 2: Apiculuture: colony organization, division of labour and communication		**Dr. CB**
		2	Unit 3: Chapter 7: Vermiculture: Habit categories		**DL**
		3	Unit II: Chapter 3 : Poultry:Feed formulations for chick		**RS**
DECEMBER					
	3rd week	**1**	Unit I chapter 2: Apiculuture: Methods and equpiments, Indegenious method, extraction and applica		**Dr. CB**
		2	Methodology of vermicomposting, and advantages		**DL**
		3	Unit II: Chapter 3 : Poultry: Nutritive value of egg and meet		**RS**
		1	Unit I chapter 2: Apiculuture		**Dr. CB**

	4th week	**2**	Diseases and pests of earthworms	**DL**
		3	Unit II: Chapter 3 : Poultry: Diseases of poultry and control measures	**RS**

Name of the Department	**ZOOLOGY**	**Subject Title --**	**Open elective**		
Semester	1	**Paper**	1		

Week/Month and Date (preferably)		**Day**	**Portions Planned for 1 hour**			**Teacher**
	1st week	**1**	Unit I chapter 2: Apiculuture: Extraction of honey from the comb and processing			**Dr. Cb**
		2	History of lac and its organization			**DL**
		3	Unit II: Chapter 4: Aquaculture:Overview and present status of aquaculture in India			**RS**
	2nd week	**1**	Unit I chapter 2: Apiculuture: Bee pasturage, Honey and bee wax uses			**Dr. CB**
		2	Unit -3 Chapter 8: Lac culture: Lac production in India			**DL**
		3	Unit II: Chapter 4: Aquaculture; Scope of aquaculture			**RS**
JANUARY						
	3rd week	**1**	Unit I chapter 2: Apiculuture: pests and diseases of bees and their management			**Dr. CB**
		2	Unit -3 Chapter 8: Lac culture : Life cycle, host plants and strains of lac Insects			**DL**
		3	Unit II: Chapter 4: Aquaculture; Types			**RS**
	4th week	**1**	Seminar			**Dr. CB**
		2	Unit -3 Chapter 8: Lac culture : Lac cultivation			**DL**
		3	Unit II: Chapter 4: Aquaculture; Construction, maintenance of pond management			**RS**

Name of the	**ZOOLOGY**	**Subject Title -**	**open elective**		
Department					
Semester	1	**Paper**	1		

Week/Month and Date		Day	Portions Planned			Teacher
(preferably)			for 1 hour			
FEBRUARY	1st week	1	SEMINAR			RS
		2	Unit -3 Chapter 8: Lac culture: Lac composition, processing , products , uses and their pests			DL
		3	Unit II: Chapter 4: Aquaculture: Culture of Carps, shrim, shell fish and pearl, composite fish culture			RS

Name of the	ZOOLOGY	Subject Title --	Chordata	
Department				
Semester	3	Paper	3	

Week/Month and Date (preferably)	Day	Portions Planned for 1 hour	Teacher
1st week	1	Unit III- 3.1- Mammalia -General characters	RB
	2	Unit I-Protochordata 1.1 Chordata general characters	Dr. SS
	3	Unit-I-1.6- Pisces-General characters of Super class Pisces.	DL
	4	unit -II 2.4 General characters and classification of modern reptiles wit	Dr. CB
2nd week	1	Unit III - 3.1- Mammalia classification	RB
	2	Unit I-1.2 chordata classification	Dr. SS
	3	Unit-I-1.6- Pisces- Classification upto sub-classes	DL
	4	Unit II 2.4 General characters and classification of modern reptiles wit	Dr. CB
OCTOBER			
3rd week	1	Unit III - 3.2- Type study- Rat- Morphology	RB
	2	Unit I-1.2 Urochordata- Herdmania morphology	Dr. SS
	3	Unit-I.7 Dipnoi	DL
	4	Unit II 2.4 Adaptive radiation in extinct reptiles with suitable examples	Dr. CB
4th week	1	Unit III-3.2-RAT -digestive system	RB
	2	Unit I-1.2 Urochordata- Herdmania- tadpole of herdmania	Dr. SS
	3	Unit-I 1..8- Migration in fishes	DL
	4	Unit II 2.4 Adaptive radiation in extinct reptiles with suitable examples	Dr. CB

Name of the Department	ZOOLOGY	Subject Title --	Chordata	
Semester	3	Paper	3	

Week/Month and Date (preferably)		Day	Portions Planned for 1 hour	Teacher
	1st week	1	Unit II 2.4 Temporal fossae in reptiles	Dr. CB
		2	Unit I-1.2 Urochordata- Herdmania- Retrogressive metamorphosis	Dr. SS
		3	Unit III-3.2- Rat circulatory system-arterial	RB
		4	Unit II- 2.3- Frog Osteology- Pectoral and Pelvic girdles and limb bones	DL
	2nd week	1	Unit III - 3.2- Type study- Rat- Circulatory system - venous	RB
		2	Unit I- 1.3- Cephalochordata- Amphioxus- Morphology	Dr. SS
		3	Unit II- 2.3- Frog Osteology- Pectoral and Pelvic girdles and limb bones	DL
		4	Unit II- 2.4- Temporal fossae in reptiles	Dr. CB
NOVEMBER				
	3rd week	1	Unit III - 3.2- Type study- Rat- Brain and cranial nerves	RB
		2	Unit I- 1.3- Cephalochordata- Amphioxus- Feeding	DR. SS
		3	Unit I -1.4- Agantha general characters	DL
		4	Unit- II- 2.4- Interesting features of Sphenodon	Dr. CB
	4th week	1	Unit III - 3.2- Type study- Rat-Urinogenital system - male	RB
		2	Unit I- 1.5- Ammocete larva	DL
		3	Unit-II 2.7- General characters, differences between Ratitae and Carin	Dr. CB
		4	Unit-I-1.3-Amphioxus - circulatory system	DR. SS

Name of the Department	ZOOLOGY	Subject Title --	Chordata	
Semester	3	Paper	3	

Week/Month and Date (preferably)		Day	Portions Planned for 1 hour	Teacher
	1st week	1	Unit III - 3.2- Type study- Rat-Urinogenital system - female	RB
		2	Unit II 2.1- General characters of Amphibia	DL
		3	Unit-II 2.7- General characters, differences betweeen Ratitae and Cari	Dr. CB
		4	Unit IV – 4.2- Poultry – definition and breeds	Dr.SS
	2nd week	1	Unit IV- 4.3- Economic Zoology-- Dairy Breeds of cattle	RB
		2	Unit IV – 4.2- Poultry – definition and breeds	Dr. SS
		3	Unit-II 2.8 Interesting features of Archaeopteryx	Dr. CB
		4	Unit II 2.1- Classification of Amphibia	DL
DECEMBER				
	3rd week	1	Unit IV- 4.3- Improvements in breeding- Artificial insemination	RB
		2	Unit IV – 4.2- Poultry – diseases	Dr. SS
		3	Unit-II 2.9 Flight adaptations in birds	Dr. CB
		4	Unit II 2.1- origin of Amphibia	DL
	4th week	1	Unit I- IV- 4.3- MOET	RB
		2	Unit IV – 4.2- Poultry – products	Dr. SS
		3	Unit-IV 4.1 Pisciculture introduction	DL
		4	Unit II 2.9 Flight adaptations in birds	Dr. CB

Name of the	ZOOLOGY	Subject Title --	Chordata		
Department					
Semester	3	Paper	3		

Week/Month and Date (preferably)		Day	Portions Planned for 1 hour		Teacher
	1st week	1	Unit II 3.0 Migration in birds		Dr. CB
		2	Unit IV – 4.2- Poultry – by products		Dr. SS
		3	Unit-IV-4.1-a- Pisiculture		DL
		4	Unit I- IV- 4.3- Bi products of dairy		RB
	2nd week	1	Unit II 3.0 Migration in birds		Dr. CB
		2	Revision		Dr. SS
		3	Unit-IV-4.1-a- Inland and Marine fisheries		DL
		4	Seminar		RB
JANUARY					
	3rd week	1	Seminar		Dr. CB
		2	Seminar		RB
		3	Unit-IV-4.1-a- Procedure, composite fish farming		DL
		4	Revision		Dr. SS
	4th week	1	Seminar		Dr. CB
		2	Seminar		RB
		3	Unit-IV-4.1-a- Significance, processing and preservation		DL
		4	Revision		Dr. SS

Name of the Department	**ZOOLOGY**	**Subject Title --**	**Non- Chordata 1**	
Semester	**3**	**Paper**	3	

Week/Month and Date (preferably)		**Day**	**Portions Planned for 1 hour**		**Teacher**
FEBUARY	**1st week**	**1**	Seminar		**Dr. CB**
		2	Seminar		**RB**
		3	Seminar		**DL**
		4	Seminar		**Dr. SS**

Name of the Department	ZOOLOGY	Subject Title --	ENVIRONMENTAL BIOLOGY AND ETHOLOGY	
Semester	5	Paper	5	

Week/Month and Date (preferably)		Day	Portions Planned for 1 hour	Teacher
OCTOBER	1st week	1	Unit- II- 2.1-a- Toxicology- Definition, types and Toxins	Dr. CB/RB
		2	Unit -I-1.1 a- Environmental biology-Fundamentals of Ecology and scope	Dr. SS
		3	Unit-III-3.1-Ethology- Introduction	DL
	2nd week	1	Unit- II- 2.1-b & c- Mechanism and toxicity and concepts	Dr. CB/RB
		2	Unit-I- 1.1 b- Concept of Habitat	Dr. SS
		3	Unit-III-3.2- Sterotyped behaviour-kinesis, taxes	DL
	3rd week	1	Unit- II- 2.2- Integrated (IPM)	Dr.CB/RB
		2	Unit-I- 1.1 c - Concept of Ecological niche	Dr. SS
		3	Unit-III-3.2-a-Reflexes,instincts and motivation	DL
	4th week	1	Unit- II- 2.3-a&b- Energy resources- types, energy sources	Dr. CB/RB
		2	Unit-I- 1.1- d- Abiotic factors	Dr. SS
		3	Unit-III-3.2-b- Acquired behaviour	DL

Name of the Department	ZOOLOGY	Subject Title --	ENVIRONMENTAL BIOLOGY AND ETHOLOGY	
Semester	5	Paper	5	

Week/Month and Date (preferably)		Day	Portions Planned for 1 hour			Teacher
NOVEMBER	1st week	1	Unit- II- 2.3-c- Nuclear energy and reactions			Dr. CB/RB
		2	Unit-I- 1.2- Energy flow in the Ecosystem			Dr.SS
		3	Unit-III-3.3- Pheramones and behaviour			DL
	2nd week	1	Unit- II- 2.4- Solid waste management			Dr.CB/RB
		2	Unit-I- 1.3- Concept of Productivity			Dr. SS
		3	Unit-III-3.4- Social behaviour in honey bees			DL
	3rd week	1	Unit- II 2.5- Wild life conservation and its management-Red data book			Dr. CB/RB
		2	Unit-I- 1.4- Population Ecology- Density, Natality and Mortality			Dr. SS
		3	Unit-III-3.4- Social behaviour in termites and honey bees			DL
	4th week	1	Unit- II 2.5-b- In-situ conservation			Dr. CB/RB
		2	Unit-I- 1.4- Age distribution, Growth, Dispersion and Biotic potential			Dr.SS
		3	Unit-III-3.7- Parental care in Fishes and amphibians			DL

Name of the Department	ZOOLOGY	Subject Title --	ENVIRONMENTAL BIOLOGY AND ETHOLOGY	
Semester	5	Paper	5	

Week/Month and Date (preferably)		Day	Portions Planned for 1 hour	Teacher
DECEMBER	1st week	1	Unit- II 2.5-c-ex-situ conservation	Dr. CB/RB
		2	Unit-I- 1.5- Community Ecology- Interspecific interactions- Negative	Dr. SS
		3	Unit-III-3.4- Social dominance and territorality	DL
	2nd week	1	Unit- II 2.6-a-Remote sensing-principles and types	Dr. CB/RB
		2	Unit-I- 1.5- Community Ecology- Interspecific interactions- Positive	Dr. SS
		3	Unit-III-3.4- a-Social systems in primates	DL
	3rd week	1	Unit- II 2.6-b- Remote sensing-Geographic information centre	Dr. CB/RB
		2	Unit-I- 1.6- Ecological sussession- Introduction, causes and trends	Dr. SS
		3	Unit-III-3.5. Biological rhythms: Definition, Circadian rhythm and biological clock	DL
	4th week	1	Unit- I- 1.7- Current environmental issues- green house effect	Dr. CB/RB
		2	Unit-I- 1.6- Types, process examples, Concept of climax	Dr. SS
		3	Unit-III-3.6-Communication in animals	DL

Name of the Department	ZOOLOGY	Subject Title --	ENVIRONMENTAL BIOLOGY AND ETHOLOGY	
Semester	5	Paper	5	

Week/Month and Date (preferably)		Day	Portions Planned for 1 hour	Teacher
JANUARY	1st week	1	Unit- I- 1.7-b-Acid rain , global warming	Dr. CB/RB
		2	Seminar	Dr. SS
		3	Unit-III-3.6- Communication in animals	DL
	2nd week	1	Unit- I- 1.7-c- Ozone layer depression	Dr. CB/RB
		2	Seminar	Dr. SS
		3	Unit-III-3.6- Biological rhythms and clock	DL
	3rd week	1	Seminar	Dr. SS
		2	Revision	Dr. CB/RB
		3	Unit-III-3.7- Types of communications	DL
	4th week	1	Revision	Dr. CB/RB
		2	Revision	Dr. SS
		3	Unit-III-3.7- Dances of honey bees	DL

Name of the Department	ZOOLOGY	Subject Title --	ENVIRONMENTAL BIOLOGY AND ETHOLOGY	
Semester	5	Paper	5	

Week/Month and Date (preferably)	Day	Portions Planned for 1 hour	Teacher

Name of the Department	ZOOLOGY	Subject Title --	ENVIRONMENTAL BIOLOGY AND ETHOLOGY	
Semester	5	Paper	5	

FEBUARY	**1st week**	**1**	Revision	**Dr. CB/RB**
		2	Revision	**Dr. SS**
		3	Special or unique behaviour	**DL**

Name of the Department	**ZOOLOGY**	**Subject Title --**	**GENETICS AND BIOTECHNOLOGY**	
Semester	5	**Paper**	6	

Week/Month and Date (preferably)		**Day**	**Portions Planned for 1 hour**			**Teacher**
	1st week	**1**	Unit III 3.1 Molecular tools: Restriction enzymes, DNA ligases, Alkalline phosphatase			**Dr. CB**
		2	UNIT I: 1.1- Genetics: Heredity and environment: Concept of genotype,phenotype,Norm of reactions			RB
		3	Unit II:2.1: Gaint chromosomes: polytene chromosomes			**RS**
	2nd week	**1**	Unit III 3.1Vectors: plasmids, Bacteriophages and Cosmids			**Dr. CB**
		2	UNIT I: 1.1- Genetics: Heredity and environment: Fur colour in Himalayan Rabbit, studies of Human twins			RB
		3	Unit II: 2.2: Gaint chromosomes; lamp brush chromosomes			**RS**
OCTOBER						
	3rd week	**1**	Unit III 3.1Host Cells, Biorectors: Definition, type and applications			**Dr. CB**
		2	Unit I:1.2 Introduction to mendelism: Medelian principles Law of segregation			RB
		3	Unit II: 2.2 Gaint chromosomes: gynandromorphs and free martins			**RS**
	4th week	**1**	Unit III 3.1Methods of gene transfer: Microinjection, electroporation of DNA, lipofection			**Dr. CB**
		2	Unit I:1.2 Introduction to mendelism: Law of independent assortment			RB
		3	Unit II: 2.2 chromosomal basis of sex determination			**RS**

Name of the Department	ZOOLOGY	Subject Title --	GENETICS AND BIOTECHNOLOGY	
Semester	5	Paper	6	

Week/Month and Date (preferably)		Day	Portions Planned for 1 hour			Teacher
NOVEMBER	1st week	1	Unit III 3.2 Application of Biotechnology: Transgenesis			Dr. CB
		2	unit I 1.3 Deviation from Mendelism: Mutiple allelism			RB
		3	Unit II: 2.2 -genic balance theory			RS
	2nd week	1	Unit III 3.2 Animal improvement			Dr. CB
		2	unit I 1.3 Deviation from Mendelism: Rh factor and its inheritance, significance of Rh factor: Erythroblastosis foetalis			RB
		3	Unit II: 2.4: Concept of gene: Fine structure of gene: Cistron, Recon and Muton			RS
	3rd week	1	Unit III 3.2 Animal improvement Artifical inseminstion			Dr. CB
		2	unit I 1.3 Deviation from Mendelism: Interaction of genes			RB
		3	Unit II: 2.4: Concept of gene: : operon concept, Inducible operon			RS
	4th week	1	Unit III 3.2 Gene therapy: Somatic cell gene therapy, Embryo cell gene therapy and germ cell			Dr. CB
		2	unit I 1.3 Deviation from Mendelism: Multiple factor inheritance of comb shape in poultry			RB
		3	Unit II 2.5: Gene mutations: Spontaneous and induced mutations			RS

Name of the Department	ZOOLOGY	Subject Title --	GENETICS AND BIOTECHNOLOGY	
Semester	5	Paper	6	

Week/Month and Date (preferably)		Day	Portions Planned for 1 hour	Teacher
DECEMBER	1st week	1	Unit III 3.2 Gene therapy: In vivo and ex -Vivo	**Dr. CB**
		2	unit I 1.3 Deviation from Mendelism: sex linkage introduction	RB
		3	Unit II 2.5: Gene mutations: CIB method of detection of mutations	**RS**
	2nd week	1	unit III 3.2 stem cells: Introduction, features, types sources and application	**Dr. CB**
		2	unit I 1.3 Deviation from Mendelism: sex linkage introduction	RB
		3	Unit II 2.5: Gene mutations: physical mutagens	**RS**
	3rd week	1	Unit III 3.2 Hybridoma technology Monoclonal antibodies and their applications	**Dr. CB**
		2	unit I 1.3 Deviation from Mendelism: X- linked inheritance-eye colour in drosophila	RB
		3	Unit II 2.5- chemical and biological mutagens	**RS**
	4th week	1	Unit III 3.2 DNA Finger printing: Definition, Steps invovled and applicatins	**Dr. CB**
		2	unit I 1.3 Deviation from Mendelism: constuction of pedigree charts for haemophilia	RB
		3	Unit II 2.3- a) numerical aneuploidy - Downs syndrome, cri-du-chat syndrome	**RS**

Name of the Department	ZOOLOGY	Subject Title --	GENETICS AND BIOTECHNOLOGY	
Semester	5	Paper	6	

Week/Month and Date (preferably)		Day	Portions Planned for 1 hour				Teacher
JANUARY	1st week	1	Unit III 3.3 PCR technique : Definition, Steps invovled and applications				Dr. CB
		2	unit I 1.3 Deviation from Mendelism: constuction of pedigree charts for colour blindless				RB
		3	UNITII- 2.3- Turners syndrome, klinefelters syndrome				RS
	2nd week	1	Unit III 3.3: RFLP, RAPD and AFLP: Definition and applications.				Dr. CB
		2	unit I 1.3 Deviation from Mendelism: Y- linked inheritance: Hyoertrichosis in man				RB
		3	unit II- GENETIC DISEASES--- alcaptonuria, albinism, thalessemia				RS
	3rd week	1	Seminars				Dr. CB
		2	unit I 1.4: Cytoplasmic inheritance: Kappa particles in paramecium				RB
		3	unit-II- 2.3-GALCTOSEMIA, cystic fibrosis				RS
	4th week	1	Seminars				Dr. CB
		2	unit I 1.4: Cytoplasmic inheritance: coiling of shells in snail				RB
		3	Unit- II-2.6- a) Eugenics, Euphenics				RS

Name of the Department	ZOOLOGY	Subject Title --	GENETICS AND BIOTECHNOLOGY	
Semester	5	Paper	6	

Week/Month and Date (preferably)		Day	Portions Planned for 1 hour				Teacher
		1	REVISION				Dr.

FEBUARY	**1st week**			**CB**
		2	REVISION	RB
		3	REVISION	**RS**

DEPARTMENT OF ZOOLOGY
ACADEMIC PLANNER-2024-25
3RD SEMESTER

Week/Month and Date (preferably)		Day	Portions Planned for 1 hour	Teacher
AUG	1st week	1	Unit-1 process of transcription- Fine structure of gene(cistron)	RB
		2	Unit-2- Regulation of gene expression 1- in prokaryotes- lac operon	CB
		3	Unit-3- Microscopy- principles and application of light and dark field microscopy	CB
		4	Unit-4- Biochemical instrumentation- Colorimetry	DL
	2nd week	1	Unit-1 process of transcription- Fine structure of gene(Recon)	RB
		2	Unit-2- Regulation of gene expression in prokaryotes- trp operon	CB
		3	Microscopy- principles and application of light and dark field microscopy	CB
		4	Spectrometry- Beer lambert ‘s law	DL
	3rd week	1	Unit-1 process of transcription- Fine structure of gene(Muton)	RB
		2	Regulation of gene expression in eukaryotes- role of chromatin in gene expression	CB
		3	Phase contrast microscope- Fluorescence	CB
		4	Absorbtion spectrum	DL
	4th week	1	RNA polymerase- types	RB
		2	Post transcriptional modifications-Capping	CB
		3	Con -focal microscopy	CB
		4	UV –VL spectrometer	DL

Week/Month and Date (preferably)		Day	Portions Planned for 1 hour		Teacher
SEP	1st week	1	RNA polymerase- types		RB
		2	Post transcriptional modifications-Capping, slicing		CB
		3	Electron microscopy-SEM and TEM		CB
		4	PH meter		DL
	2nd week	1	RNA polymerase- functions		RB
		2	Post transcriptional modifications- poly adenylation		CB
		3	Electron microscopy-SEM and TEM		CB
		4	Measurement of PH		DL
	3rd week	1	Transcription in prokaryotes		RB
		2	Concept of RNA editing(mRNA)		CB
		3	Centrifugation and chromatography- centrifugation principles and types		CB
		4	Principle and applications and safety measures of Radio traser techniques		DL
	4th week	1	Transcription in eukaryotes		RB
		2	Gene silencing and RNAi		CB
		3	centrifugation principles and types		CB
		4	Principle and applications and safety measures of auto radiography		DL

Week/Month and Date (preferably)		Day	Portions Planned for 1 hour	Teacher
OCT	1st week	1	Transcription in eukaryotes, Translation in prokaryotes	RB
		2	Regulation of gene expression 2- Post translation modifications- purpose advantages and significance	CB
		3	Centrifugation- applications(high speed and ultra-centrifugation)	CB
		4	Molecular techniques- Principles and applications of agarose gel electrophorosis	DL
	2nd week	1	Unit-2- process of translation- Genetic code	RB
		2	Chromatography-principles and applications of GC	CB
		3	Centrifugation- applications(high speed and ultra-centrifugation)	CB
		4	Principles and applications of SDS_PAGE, Principles and applications of ELISA	DL
	3rd week	1	Genetic code and its salient features	RB
		2	Post translation modifications- phosphorylation and acetylation	CB
		3	Chromatography-principles and applications of TLC	CB
		4	Principles and applications of DNA sequencing	DL
	4th week	1	Genetic code and its salient features	RB
		2	Intracellular protein degradation-lysosomal autophagy	CB
		3	Chromatography-principles and applications of HPLC	CB
		4	Principles and applications of PCR, DNA finger printing	DL

Week/Month and Date (preferably)		Day	Portions Planned for 1 hour	Teacher
NOV	1st week	1		RB
		2	Intracellular protein degradation-ubiquitin proteasome pathway	CB
		3		CB
		4		DL
	2nd week	1	Translation in eukaryotes	RB
		2	Intracellular protein degradation-ubiquitin proteasome pathway	CB
		3	Chromatography-principles and applications of GC	CB
		4	Principles and applications of Southern blotting and Western blotting	DL
	3rd week	1	Revision	RB
		2	Revision	CB
		3	Revision	CB
		4	Revision	DL
	4th week	1	Revision	RB
		2	Revision	CB
		3	Revision	CB
		4	Revision	DL

DEPARTMENT OF ZOOLOGY

ACADEMIC PLANNER 2024-25

V SEMESTER PAPER-5

Non-Chordates and Economic Zoology

Week/Month and Date		Day	Portions Planned for 1 hour	Teacher
AUG	1st week	1	**Unit-II** 1. Annelida *Hirudinaria granulosa* (Leech)-Morphology and Reproduction	CB
		2	Unit-I 1.*Paramecium caudatum*- Morphology, Reproduction- Binary fission & Conjugation	RB
		3	**Unit-III Mollusca :** *Pila globosa*- Morphology, Shell	DL
	2nd week	1	**Unit-II** 1. Annelida *Hirudinaria granulosa* (Leech)-Morphology and Reproduction	CB
		2	Unit-I 1.. *Paramecium caudatum*- Morphology, Reproduction- Binary fission & Conjugation	RB
		3	**Unit-III Mollusca:** Respiration, Nervous System and Reproduction	DL
	3rd week	1	UNIT II 2 .1 Arthropoda *Palaemon* (Prawn)- Morphology Appendages	CB
		2	Unit-I 1.1. *Sycon*- Canal system.	RB
		3	**Unit-III Mollusca:** Respiration, Nervous System and Reproduction	DL
	4th week	1	UNIT II 2 .2 Appendages Nervous System andreproduction	CB
		2	Unit-I 1.2. *Obelia*- Morphology and Reproduction	RB
		3	**Unit-III Mollusca:** Respiration, Nervous System and Reproduction	DL

Week/Month and Date		Day	Portions Planned for 1 hour	Teacher
SEP	1st week	1	UNIT II 2 .2 Appendages Nervous System andreproduction	CB
		2	Unit-I 1.3 **Ctenophora:** Salient feature and affinities.	RB
		3	**Unit-III 2.1 Echinodermata** *Pentoceros*-Morphology	DL
	2nd week	1	**Unit-IV 1. Economic zoology:** life cycle of gundi bug	CB
		2	Unit-I 2.1 Phylum Platyhelminthes: *Taenia solium*- Morphology and reproduction..	RB
		3	**Unit-III 2.1 Echinodermata:** Water Vascular System	DL
	3rd week	1	**Unit-IV 1. Economic zoology:** life cycle of Sugarcane leaf hopper	CB
		2	Unit-I 2.1 Phylum Platyhelminthes: *Taenia solium*- Morphology and reproduction.	RB
		3	**Unit-III 2.1 Echinodermata:** Water Vascular System	DL
	4th week	1	**Unit-IV 1. Economic zoology:** life cycle of Mosquitoes	CB
		2	Unit-I 2.3 Phylum Nemathelminthes *Ascaris lumbricoides*-Morphology and Reproduction.	RB
		3	**Unit-III 3.1Sub Phylum: Hemichordata:** Type Study of *Balanoglossus*–Habit and Habitat	DL

Week/Month and Date		Day	Portions Planned for 1 hour	Teacher
OCT	1st week	1	UNIT IV : Economic Zoology part II: Lac culture	CB
		2	Unit-I 2.3 Phylum Nemathelminthes *Ascaris lumbricoides*-Morphology and Reproduction.	RB
		3	**Unit-III 3.1** Sub Phylum: Hemichordata**:** Tornaria larva.	DL
	2nd week	1	UNIT IV : Economic Zoology part II: Lac culture	CB
		2	Unit-I 2.3 Phylum Nemathelminthes *Ascaris lumbricoides*-Morphology and Reproduction.	RB
		3	**Unit-III 3.1** Sub Phylum: Hemichordata: Systematic position of Hemichordata.	DL
	3rd week	1	UNIT IV : Economic Zoology part II: Lac culture	CB
		2	Unit-I 2.3 Phylum Nemathelminthes *Ascaris lumbricoides*-Morphology and Reproduction.	RB
		3	**Unit-III 3.1** Sub Phylum: Hemichordata: Systematic position of Hemichordata.	DL
	4th week	1	UNIT IV : Economic Zoology part II: vermiculuture	CB
		2	SEMINAR	RB
		3	SEMINAR	DL

Week/Month and Date		Day	Portions Planned for 1 hour	Teacher
NOV	1st week	1	UNIT IV : Economic Zoology part II:Vermiculture	CB
		2	SEMINAR	RB
		3	SEMINAR	DL
	2nd week	1	SEMINAR	CB
		2	REVISION	RB
		3	REVISION	DL
	3rd week	1	Revision	CB
		2	TEST	RB
		3	REVISION	DL
	4th week	1	TEST	CB
		2	TEST	RB
		3	TEST	DL