TEACHING PLAN
Subject : ZOOLOGY (Major)

SEMESTER – II

Academic Period : 1st January to 30th May 2017
Paper : ZOOMT - 201
Broad Subject : BIOCHMESTRY

Unit	Sub-Theme	Course Contents	Probable Period of teaching	Name of the teacher
I	Laws of thermodynamics	1. Laws of thermodynamics& application in biochemistry, 2. Free energy change inB.chemical sys. 3. ATP,High energy phosphate,concept of rodex sys.Basic prin. Of Biochmistry	1st January to 15th May	RKS
II	Structure & clasi. Of carbohydrates, Protein etc	1. Structure & clasi. Of carbohydrates, Protein 2. Aminoacid,Lipids,Level of organization of protein	1st January to 15th May	RKS
III	Metabolism.Glycolysis, Krebs cycle etc	1. General concept of Metabolism.Glycolysis,Krebs cycle,ATP synthesis, 2. Oxidation of fatty acids. activities 3. Enzymes nomenclature,IUB clasi, Kinetics,Enzymes inhibition,Vitamines.	1st January to 15th May	APB
IV	Enzyme, DNA & RNA	1.Enzyme nomenclature, ,IUB clasi, Kinetics,Enzymes inhibition, 2. Structure &forms of DNA & RNA;DNA as genetic material 3. DNA replication,genetic code, Transcription	1st January to 15th May	RKS
V	Structure &forms of DNA & RNAetc.	1.Structure &forms of DNA & RNA; 2. DNA as genetic material 3. DNA replication, genetic code, Transcription	1st January to 15th May	RKS

SEMESTER – IV

Academic Period : 1st January to 30th May 2017

Paper : ZOOMT - 401

Broad Subject : CELL BIOLOGY, HISTOLOGY , HISTOCHEMISTRY

Unit	Sub-Theme	Course Contents	Probable Period of teaching	Name of the teacher
I	CELL BIOLOGY	1. Prokariotic & eukaryotic cells structure & function of cell organelles 2. Lysosome,ribosome,Golgibodies, nucleus, structure and function ofplasma membrane,extracellular matrix, endocytosis. . .	1st January to 15th May	SD
II	CELL BIOLOGY	1. Structure & function of chromosome,polytene & lamp brush chromosome molecular organization,nucleosome, DNA packaging in prokaryotes,eukaryotes.heterochromatin &euchromatin models of chromo. Movements.	1st January to 15th May	SD
III	, CELL BIOLOGY	1 Cell cycle, molecular events in diff. phases, regulation of cell cycle, 2.Cell growth, Mitosis, Mieosis, apoptosis. .	1st January to 15th May	SD
IV	CELL BIOLOGY	Basic concept of cell signaling, endocrine,paracrine,autocrine etc, second messenger ,Function ofcell surface receptors etc	1st to 15th May	SD
V	**HISTOLOGY, HISTOCHMISTRY**	1.Basic principal of fixation, dehydration, embedded, 2.Sectioning &spreading, types of staining, vital staining, classi. &properties of dyes. 3. Animal tissues,Histological struc. of muscles 4. Metachromatic dyes,& staining. Animal tissues,Histological struc. of muscles 5. Epithelium,bone,lung,kidney,liver,stomach,intestine of mammals	1st January to 15th May	APB

HOD Remarks; Course completion report

SEMESTER –1V

Academic Period : 1st January to 30th May 2017
Paper : ZOOMT - 403
Broad Subject : DEVELOPMENTAL BIOLOGY

Unit	Sub-Theme	Course Contents	Probable Period of teaching	Name of the teacher
I	GAMETOGENESIS	1. Formation of gametes,spermatogenesis,oogenesis,Struc. Maturation & growth of sperm & ovum,vitallogenesis.	1st January to 15th May	SH
		.		
II	FERTILIZATION	1. Types and mech. Of fertilization Mono & polyspermy.Parthenogenesis.	1st January to 15th May	SH
III	, CLEVAGE & GASTRULATION	1.Cleavage pattern types	1st to28th Feb	SH
		2. Blustulation,gastrulation in chick,fate map germ layers, organizers inductive substance.	1st to30thMarch	
		.3 Induction,property and mechanism of action organizers inductive substance.	1st to 30th Apr	
IV	ORGANOGENESIS	1.Development of sense organs,eye & ear	1st to 15th May	SH
V	EXTRA.EM .MEMBRANE	1.Extra embryonic membrane in birds & placentation of mammals	1st to 28th Feb	APB

HOD
Remarks; Course completion report

SEMESTER –VI

Academic Period : 1st January to 30th May 2017
Paper : ZOOMT – 601
Broad Subject : PARASITOLOGY & ETHOLOGY

Unit	Sub-Theme	Course Contents	Probable Period of teaching	Name of the teacher
I	**PARASITISM**	1. Parasites,host &vectors,parasitic adaption effects on host. Life histry & mode of infection 2. pathogenecity of E-histolytica,Trypanosoma spp.L-donovanii ,Giardiza,Trichomonus,Plasmodium spp.	1st January to 15th May	SD
		.		
II	BACTERIA	1.Pathogenosity of bacteria& virus,(Rickettsia,borrelia,Treponema &Leptospira)	1st January to 15th May	SD
		2.Life histry, parasitic adaptation,		
		3. , pathogenecity of T-solium,F-hepatica A-duodenole, &W-bancrofit.		
III	VACTORS	1 .Vactors of human disease-Malaria,Yellow fever, dengue, haemorrhageic fever, filariasis,Japanese B-encephalities &dengue measers ofcontrol of the vectors.	1st January to 15th May	TG
IV	**ETHOLOGY**	1. Introduction to animal behavior,brief history of ethology, pattern of behavior	1st January to 15th May	TG
		2.sense organs & behavior, its genetical &ecological aspects.		
V	**ETHOLOGY**.	1. Diff. types of orientation & comm.. in animals,.	1st January to 15th May	TG
		2. , comparative aspects of learning &offensive , defensive behavior in insects		

HOD
Remarks; Course completion report

SEMESTER –VI

Academic Period : 1st January to 30th May 2017
Paper : ZOOMT - 603
Broad Subject : MOLECULAR BIOLOGY & IMMUNOLOGY

Unit	Sub-Theme	Course Contents	Probable Period of teaching	Name of the teacher
I	**GENOME**	1.Genome organization in prokaryotes & eukaryotes,DNA as genetic material 2.Structure & function of DNA & RNA,Watson &Crick model, etc.	1st January to 15th May	SD
II	GENETIC CODE	1. Replication & transcription,genetic code,Wobble hypothesis, protein biosynthes in prokaryotes.	1st January to 15th May	RKS
III	RECOMBINATION	1.Recombination in prokaryotes transformation,conjugation,& transduction 2.Transposons & plasmids,regulation of genes expression in prokaryotes,operen concept.		RKS
IV	IMMUNITY	1. Types of immunity,cells & organs invoiled in immunity, lymphoid organs 2. Antigenes,its properties,adjuvant,&haptens, antigen-antibody reaction,vaccins & vaccination.	1st January to 15th May	TG
V	IMMUNOGLOBIN	1.Immunoglobulin,basic structure, classes & function.clonal selection theory,polyclonal & monoclonal antibodies, majorhistocompatibility. Complex structure & function. 3. Immune sys. In health & disease,basic concept of immunodiagnostic technique, RIA,ELISA,AIDS.		TG

HOD
Remarks; Course completion report

SEMESTER –VI

Academic Period : 1st January to 30th May 2017

Paper : ZOOMT - 604

Broad Subject : BIOTECHNOLOGY &BIOINFORMATICS

Unit	Sub-Theme	Course Contents	Probable Period of teaching	Name of the teacher
I	**GENETIC ENGINEERING**	1. Introduction, history, scope, basic knowledge of genetic engeneering,protoplast fusion &somatic hybridization technique.	1st January to 15th May	SD
		2.Basic principal of recombinant DNA ,cutting,joining & visualization of DNA fragments.cloning vactors &gene cloning, application of DNA technology in agriculture & health.		
		3.Industrial biotechnology with alcohol & antibiotics.		
II	GENETIC CODE	1. Introduction of Omics, basic concept of structural &functional genomics,	1st January to 15th May	RKS
		2.DNA sequencing,humane genome project, introduction toproteomics &transcriptomics.		
III	RECOMBINATION	1.Regulation of biotechnology, production& applicationof transgenic animals .	1st January to 15th May	RKS
		2.Genetically modified organism, their benefits & risk assessment;IPR. Patent andethical issues related to biotechnology.		
		3. Patent andethical issues related to biotechnology.		
IV	BIOINFORMATICS	1.Fundamentals of bioinformatics,introduction,histry & scope of bioinformatics.	1st January to 15th May	RKS
		2. Source ofinformation, internat,world wide web &webbrowsers, biological database.Basic concept of primary & secondary database.		
		3. NCBI, gene bank &SWISS-PROT ENTREZ etc.		
V	IMMUNOGLOBIN	1.Data base search & sequence alignment, tools of sequence alignment 2.-FASTA &BLAST . Method of sequence alignment,phylogenetic analysis.	1st January to 15th May	AB
		3.Basic concept ,steps in evalution of phylogeny & construction of phylogenetic tree.		
		4.construction of phylogenetic tree.		

HOD

Remarks; Course completion report

SEMESTER –VI

Academic Period : 1st January to 30th May 2017

Paper : ZOOMT - 606

Broad Subject : ECONOMIC ZOOLOGY

Unit	Sub-Theme	Course Contents	Probable Period of teaching	Name of the teacher
I	PEST MANAGEMENT	1.Insect pest of peddy,tea,& stored grains & their biology ,pest management-chemical,cultural & biological,integrated pest management.	1st January to 15th May	SB
II	ENTOMOLOGY	1.Life histry of silkworms, their cultural technique,biology disease & prevention. 2. their cultural technique,biology disease & prevention	1st January to 15th May	SB
III	CULTURE OF INSECT	1.Life history of honey-bee, their rearing technique, culture of lac insect 2. , culture of lac insect	1st January to 15th May	SB
IV	AQUACULTURE	1.Principal & practices of aquaculture, fish & prawn culture, preparation& management of diff. type of ponds for fish culture, 2. Indused breeding, hybridization technique, fish preservation &by-products.	1st January to 15th May	SH
V	PIGGERY,POULTRY	1.Piggery & management & practices of pig rearing,poultry.. 2. . Selection of breed & their scientific rearingmethod, poultry diseases & their prevention/ control	1st January to 15th May	SH

HOD

Remarks; Course completion report