

Name of the teacher: Prof. Dr R.V Salunkhe

Year: 2020-2021

Semester: I

Subject: Pest management

Paper: I

Class: T Y B Sc

Part I : Teaching Plan

Part II : Evaluation of Plan

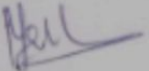
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---------|-------------|-------|---------------------|--------------------------|--|------------------------|--|----------------------|-----------------------------|
| Sr. No. | Month | Week | No. of working days | No. of periods available | Topics to be taught | No. of periods engaged | Topics taught | Deviation in periods | Remarks |
| 1 | July 2021 | 2 & 4 | 11 | 8 | 1. Pest: Definition, Types of pests, Types of damages caused by the pest. 2. Pest management using Regulatory control: Quarantine, Eradication, Control districts, "Crop-free" periods. | 8 | 1. Pest: Definition, Types of pests, Types of damages caused by the pest. 2. Pest management using Regulatory control: Quarantine, Eradication, Control districts, "Crop-free" periods. | Nil | -- |
| 2 | August 2021 | 1 & 2 | 11 | 8 | 3. Pest management using Cultural control: Sanitation, Tillage, Crop rotation, Cropping systems. 4. Pest management using Biological control: Ecological considerations, Biological control of insects, Biological control of plant disease, Biological control of weeds. | 9 | 3. Pest management using Cultural control: Sanitation, Tillage, Crop rotation, Cropping systems. 4. Pest management using Biological control: Ecological considerations, Biological control of insects, Biological control of plant disease, Biological control of weeds. | 1 | Extra lecture was conducted |
| 3 | Sept 2021 | 1 & 2 | 12 | 8 | 5. Biotechnology approaches in pest management: Introduction. Recent advance in use of fungi and viruses. Methodology in Biotechnology, Somaclonal variability, Concept of Genetic engineering and Transgenic plants. | 8 | 5. Biotechnology approaches in pest management: Introduction. Recent advance in use of fungi and viruses. Methodology in Biotechnology, Somaclonal variability, Concept of Genetic engineering and Transgenic plants. | Nil | -- |
| 4 | Sept 2021 | 3 & 4 | 12 | 8 | 6. Integrated pest management (IPM): Principles and its components, Advantages and disadvantages, Biological control - | 8 | 6. Integrated pest management (IPM): Principles and its components, Advantages and disadvantages, Biological control - Predators, | | -- |

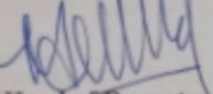
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|---|----------|-------|----|---|---|---|--|---|---|-----------------------------|
| | | | | | Predators, Parasitoids, Entomopathogens, Weed killers and their mass production. 7. Insecticides: Classification of insecticides based on mode of entry, Action and chemical nature. | | | Parasitoids, Entomopathogens, Weed killers and their mass production. 7. Insecticides: Classification of insecticides based on mode of entry, Action and chemical nature. | | |
| | | | | | Insecticides formulations and their uses. 8 Safe handling of insecticides, Insecticide residue: Methods of residue detection – Organochlorine, Organophosphates, Synthetic Pyrethroids, Systemic, Problems in fruits, vegetables, medicinal plants, Maximum permissible residue limits (MRLs). | | | Insecticides formulations and their uses. 8 Safe handling of insecticides, Insecticide residue: Methods of residue detection – Organochlorine, Organophosphates, Synthetic Pyrethroids, Systemic, Problems in fruits, vegetables, medicinal plants, Maximum permissible residue limits (MRLs). | | |
| 5 | Oct 2021 | 1 & 2 | 12 | 8 | | 9 | | | 1 | Extra lecture was conducted |

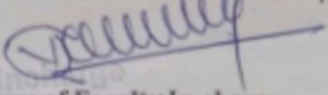
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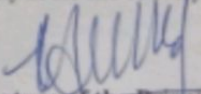
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3 The second copy must be retained by the teacher and submitted at the end of the term. Part second of the plan i. e. columns 7 to 10 must be filled up progressively at the end of every week.


Signature of Teacher


Signature of Head of Department
Dr. J. P. Sarwade
M.Sc., Ph.D., FZSI
Head
Department of Zoology,
Arts, Science & Commerce College,
Indapur, Dist. Pune - 413106


Signature of Faculty In-charge
Arts, Science & Commerce
College, Indapur, Dist. Pune


Signature of the Principal
PRINCIPAL
ARTS, SCIENCE AND
COMMERCE COLLEGE
INDAPUR-413106 DIST-PUNE

Name of the teacher: Prof Gunvare K.D

Semester: I

Year: 2020-2021

Subject: Histology

Paper: II

Class: T Y B Sc

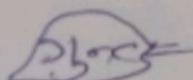
Part I : Teaching Plan

Part II : Evaluation of Plan

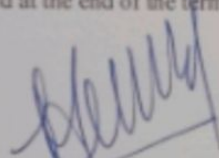
| 1 Sr. No. | 2 Month | 3 Week | 4 No. of working days | 5 No. of periods available | 6 Topics to be taught | 7 No. of periods engaged | 8 Topics taught | 9 Deviation in periods | 10 Remarks |
|-----------------|----------------|-----------|--------------------------------|-------------------------------------|--|--------------------------------|--|------------------------------|-----------------------------|
| 1 | July 2021 | 2 & 4 | 11 | 8 | 1. Introduction: Definition and Scope of Histology. 2. Definitions and Review of Types of Tissues: Epithelial tissue, Connective tissue, Nervous tissue, Muscular tissue. | 8 | 1. Introduction: Definition and Scope of Histology. 2. Definitions and Review of Types of Tissues: Epithelial tissue, Connective tissue, Nervous tissue, Muscular tissue. | Nil | -- |
| 2 | August 2021 | 1 & 2 | 11 | 8 | 3. Histological study of following mammalian organs: Skin (V. S.), Tooth (V.s), Tongue (C. S.) with reference to mucosa papillae and taste buds. | 9 | 3. Histological study of following mammalian organs: Skin (V. S.), Tooth (V.s), Tongue (C. S.) with reference to mucosa papillae and taste buds. | 1 | Extra lecture was conducted |
| 3 | Sept 2021 | 1 & 2 | 12 | 8 | 4. Histological study of Alimentary canal and Liver: Oesophagus (T. S.), Stomach (T. S.), Duodenum (T. S.), Rectum (T. S.), Liver (C. S.). | 8 | 4. Histological study of Alimentary canal and Liver: Oesophagus (T. S.), Stomach (T. S.), Duodenum (T. S.), Rectum (T. S.), Liver (C. S.). | Nil | -- |
| 4 | Sept 2021 | 3 & 4 | 12 | 8 | 5. Histological study of Respiratory organs: Trachea (T. S.), Lung (C. S.). 6. Histological study of Excretory organs: Kidney (L. S.), Juxtaglomerular complex. | 8 | 5. Histological study of Respiratory organs: Trachea (T. S.), Lung (C. S.). 6. Histological study of Excretory organs: Kidney (L. S.), Juxtaglomerular complex. | | -- |
| 5 | Oct 2021 | 1 & 2 | 12 | 8 | 7. Histological study of Reproductive organs: Testis (T. S.) with reference to Seminiferous Tubules and Cells of Leydig, Ovary (C. S.). | 9 | 7. Histological study of Reproductive organs: Testis (T. S.) with reference to Seminiferous Tubules and Cells of Leydig, Ovary (C. S.). | 1 | Extra lecture was conducted |

| | | | | | | | |
|--|--|--|--|--|--|--|--|
| | | | | 8 Histology of Endocrine glands: Pituitary gland, Thyroid gland, Adrenal gland, Pancreas (C. S.) including both exocrine and endocrine components. | 8 Histology of Endocrine glands: Pituitary gland, Thyroid gland, Adrenal gland, Pancreas (C. S.) including both exocrine and endocrine components. | | |
|--|--|--|--|--|--|--|--|

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Signature of Teacher



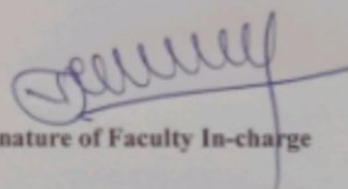
Signature of Head of Department

Dr. J. P. Sarwade

M.Sc., Ph.D. (Zoo)

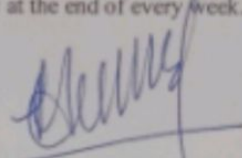
Head

Department of Zoology,
Arts, Science & Commerce College,
Indapur, Dist. Pune - 413105



Signature of Faculty In-charge

Incharge
Science Faculty
Arts, Science & Commerce
College, Indapur, Dist. Pune



Signature of the Principal

PRINCIPAL
ARTS, SCIENCE AND
COMMERCE COLLEGE
INDAPUR-413105 DIST-PUNE

Name of the teacher: Prof Vyavhare V

Semester: I

Subject: Biological Chemistry

Year: 2020-2021

Part I : Teaching Plan

Paper: III

Class: T Y B Sc

Part II : Evaluation of Plan

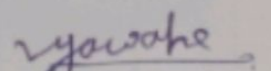
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|-----------------|----------------|-----------|--------------------------------|-------------------------------------|---|--------------------------------|---|------------------------------|-----------------------------|
| 1 | July 2021 | 2 & 4 | 11 | 8 | 1. Introduction of Biochemistry: Importance of Biochemistry in Life Sciences. 2. p H and Buffers: Concept of pH, Concept of pH scale, biological significance of p H , Concept of acid and base, Ionization of acids and bases, Derivation of Henderson-Hassel Balch equation & its applications, Buffer - Definition, Concept, Functions, Types of buffer and Buffering Capacity. | 8 | 1. Introduction of Biochemistry: Importance of Biochemistry in Life Sciences. 2. p H and Buffers: Concept of pH, Concept of pH scale, biological significance of p H , Concept of acid and base, Ionization of acids and bases, Derivation of Henderson-Hassel Balch equation & its applications, Buffer - Definition, Concept, Functions, Types of buffer and Buffering Capacity. | Nil | -- |
| 2 | August 2021 | 1 & 2 | 11 | 8 | 3. Carbohydrates: Definition, Classification & Biological importance of Carbohydrates Isomerism in carbohydrates - Structural and Stereoisomerism, Significance of Gluconeogenesis, Glycogenolysis and Glycogenesis, Clinical Significance - Hypoglycemia and Hyperglycemia. | 9 | 3. Carbohydrates: Definition, Classification & Biological importance of Carbohydrates Isomerism in carbohydrates - Structural and Stereoisomerism, Significance of Gluconeogenesis, Glycogenolysis and Glycogenesis, Clinical Significance - Hypoglycemia and Hyperglycemia. | 1 | Extra lecture was conducted |
| 3 | Sept 2021 | 1 & 2 | 12 | 8 | 4. Amino acids and Proteins: General Structure of amino acids and Peptide bond, Essential and non-essential amino acids, Types of proteins, protein structures (primary, | 8 | 4. Amino acids and Proteins: General Structure of amino acids and Peptide bond, Essential and non-essential amino acids, Types of proteins, protein structures (primary, secondary, tertiary | Nil | -- |

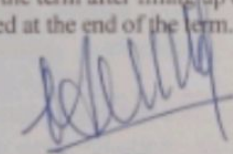
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| | | | | | secondary, tertiary and quaternary structures with suitable example), Forces responsible for their stability, Biological importance of proteins – Biocatalysts, Carrier proteins Contractile proteins, Hormonal role of proteins. | | | | and quaternary structures with suitable example), Forces responsible for their stability, Biological importance of proteins – Biocatalysts, Carrier proteins Contractile proteins, Hormonal role of proteins. | | | |
| 4 | Sept 2021 | 3 & 4 | 12 | 8 | 5. Enzymes: Nomenclature, Types and properties of enzymes, Regulatory and non-regulatory enzymes, Enzyme inhibition, Factors influencing enzyme activity (pH, temperature, substrate concentration), Introduction of isoenzymes and cofactor | 8 | | | 5. Enzymes: Nomenclature, Types and properties of enzymes, Regulatory and non-regulatory enzymes, Enzyme inhibition, Factors influencing enzyme activity (pH, temperature, substrate concentration), Introduction of isoenzymes and cofactor | | | |
| 5 | Oct 2021 | 1 & 2 | 12 | 8 | Clinical significance of enzymes - PKU and AKU 6. Lipids: Introduction. Fatty acids - Types and nomenclature (saturated and unsaturated), Clinical significance (obesity, atherosclerosis, myocardial infarction), Biological importance of lipids. | 9 | | | Clinical significance of enzymes - PKU and AKU 6. Lipids: Introduction. Fatty acids - Types and nomenclature (saturated and unsaturated), Clinical significance (obesity, atherosclerosis, myocardial infarction), Biological importance of lipids. | 1 | | Extra lecture was conducted |

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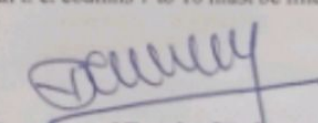
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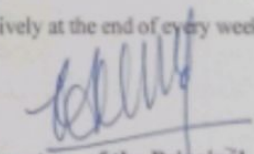

Signature of Teacher


Signature of Head of Department

Dr. J. P. Sarwade
M.Sc., Ph.D., FZSI
Head
Department of Zoology,
Arts, Science & Commerce College,
Indapur, Dist. Pune - 413108


Signature of Faculty In-charge

Science Faculty
Arts, Science & Commerce
College, Indapur, Dist. Pune


Signature of the Principal

PRINCIPAL
ARTS, SCIENCE AND
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INDAPUR-413108 DIST-PUNE

Name of the teacher: Prof. Dr Salunkhe R.V
Semester: I

Subject: Genetics

Year: 2020-2021

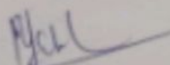
| Part I : Teaching Plan | | | | | Part II : Evaluation of Plan | | | | |
|------------------------|-------------|-------|---------------------|--------------------------|---|------------------------|---|----------------------|-----------------------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Sr. No. | Month | Week | No. of working days | No. of periods available | Topics to be taught | No. of periods engaged | Topics taught | Deviation in periods | Remarks |
| 1 | July 2021 | 2 & 4 | 11 | 8 | 1. Introduction to genetics: Classical and Modern concept of Gene, Cistron, Muton, Recon, Mendel's laws of Inheritance. 2 Exceptions to Mendelian inheritance: Incomplete dominance, Co-dominance, Multiple alleles: Concept, characteristics and importance of multiple Lethal alleles. | 8 | 1. Introduction to genetics: Classical and Modern concept of Gene, Cistron, Muton, Recon, Mendel's laws of Inheritance. 2 Exceptions to Mendelian inheritance: Incomplete dominance, Co-dominance, Multiple alleles: Concept, characteristics and importance of multiple Lethal alleles. | Nil | -- |
| 2 | August 2021 | 1 & 2 | 11 | 8 | 3. Gene Mutation: Definition, Types of mutations: spontaneous, induced, somatic, gametic, forward, reverse. Types of point mutation - deletion, insertion, substitution, transversion, transition, Mutagenic agents a) UV radiation and ionising radiation. b) Base analogs, alkylating and intercalating agents. | 9 | 3. Gene Mutation: Definition, Types of mutations: spontaneous, induced, somatic, gametic, forward, reverse. Types of point mutation - deletion, insertion, substitution, transversion, transition, Mutagenic agents a) UV radiation and ionising radiation. b) Base analogs, alkylating and intercalating agents. | 1 | Extra lecture was conducted |
| 3 | Sept 2021 | 1 & 2 | 12 | 8 | 4. Sex-determination: Introduction, Types of sex determination: -XX-XY, ZZ-ZW, XX-XO and Parthenogenesis, Hypodiploidy, Gynandromorphism. 5. Population Genetics: Basic Concepts in population genetics: | 8 | 4. Sex-determination: Introduction, Types of sex determination: -XX-XY, ZZ-ZW, XX-XO and Parthenogenesis, Hypodiploidy, Gynandromorphism. 5. Population Genetics: Basic Concepts in population genetics: Mendelian | Nil | -- |

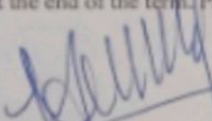
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| | | | | | Mendelian population, gene pool, gene / allele, Frequency, chance mating (Panmictic mating), Hardy Weinberg law and its equilibrium. | | population, gene pool, gene / allele, Frequency, chance mating (Panmictic mating), Hardy Weinberg law and its equilibrium. | | |
| 4 | Sept 2021 | 3 & 4 | 12 | 8 | 6. Human Population Genetics: Karyotype, Genetic disorders, Structural & numerical alterations of chromosomes (chromosomal aneuploidy - Down, Patau, Edward, Turner and Klinefelter syndromes). | 8 | 6. Human Population Genetics: Karyotype, Genetic disorders, Structural & numerical alterations of chromosomes (chromosomal aneuploidy - Down, Patau, Edward, Turner and Klinefelter syndromes). | | |
| 5 | Oct 2021 | 1 & 2 | 12 | 8 | 7. Sex linked inheritance in human: Colour - blindness, Haemophilia, Hypertrichosis 8. Application of genetics: Genetic counselling, Diagnostics & breeding technology. | 9 | 7. Sex linked inheritance in human: Colour - blindness, Haemophilia, Hypertrichosis 8. Application of genetics: Genetic counselling, Diagnostics & breeding technology. | 1 | Extra lecture was conducted |

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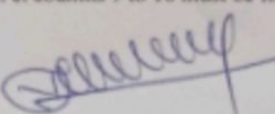
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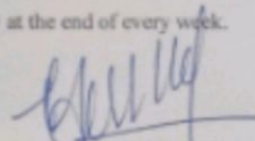

Signature of Teacher


Signature of Head of Department

Dr. J. P. Sarwade
M.Sc., Ph.D., F.Z.S.
Head
Department of Zoology,
Arts, Science & Commerce College,
Indapur, Dist. Pune - 413106


Signature of Faculty In-charge

Incharge
Science Faculty
Arts, Science & Commerce
College, Indapur, Dist. Pune


Signature of the Principal
PRINCIPAL
ARTS, SCIENCE AND
COMMERCE COLLEGE
INDAPUR-413106 DIST-PUNE

Developmental Biology

Part I : Teaching Plan

Paper: V

Class: T Y B Sc

Part II : Evaluation of Plan

| 1 Sr. No. | 2 Month | 3 Week | 4 No. of working days | 5 No. of periods available | 6 Topics to be taught | 7 No. of periods engaged | 8 Topics taught | 9 Deviation in periods | 10 Remarks |
|-----------------|----------------|-----------|--------------------------------|-------------------------------------|---|--------------------------------|---|------------------------------|-----------------------------|
| 1 | July 2021 | 2 & 4 | 11 | 8 | Fundamentals of Developmental Biology: Definition and scope. Concepts in Developmental Biology: Growth, Differentiation, Dedifferentiation, Cell determination, Cell communication, Morphogenesis, Induction and Regeneration. Theories of Developmental Biology: Preformation, Pangenesis. Epigenesis. Axial gradient. Germplasm. Gametogenesis: Spermatogenesis & Structure of sperm with respect to human. 3.2 Oogenesis & Structure of ovum with respect to human. 3.3 Types of eggs. | 8 | Fundamentals of Developmental Biology: Definition and scope. Concepts in Developmental Biology: Growth, Differentiation, Dedifferentiation, Cell determination, Cell communication, Morphogenesis, Induction and Regeneration. Theories of Developmental Biology: Preformation, Pangenesis. Epigenesis. Axial gradient. Germplasm. Gametogenesis: Spermatogenesis & Structure of sperm with respect to human. 3.2 Oogenesis & Structure of ovum with respect to human. 3.3 Types of eggs. | Nil | -- |
| 2 | August 2021 | 1 & 2 | 11 | 8 | Fertilization: Concept and types Chemotaxis. Sperm penetration; Acrosome reaction, Capacitation & Decapacitation. Activation of ovum: Fertilization cone. Prevention of polyspermy: Fast block & Slow block. Significance of fertilization. Cleavage and Blastula: Planes and symmetry of cleavage. Types of cleavage. | 9 | Fertilization: Concept and types Chemotaxis. Sperm penetration: Acrosome reaction, Capacitation & Decapacitation. Activation of ovum: Fertilization cone. Prevention of polyspermy: Fast block & Slow block. Significance of fertilization. Cleavage and Blastula: Planes and symmetry of cleavage. Types of cleavage. | 1 | Extra lecture was conducted |
| 3 | Sept 2021 | 1 & 2 | 12 | 8 | Definition and types of Blastulae. Gastrulation: Definition and Concept. Basic cell movements in gastrulation: Epiboly, Emboly, Convergence, Invagination, Ingression & Involution with reference to frog. Concept of Organizer: Primary, Secondary and Tertiary. | 8 | Definition and types of Blastulae. Gastrulation: Definition and Concept. Basic cell movements in gastrulation: Epiboly, Emboly, Convergence, Invagination, Ingression & Involution with reference to frog. Concept of Organizer: Primary, Secondary and Tertiary. | Nil | -- |
| 4 | Sept 2021 | 3 & 4 | 12 | 8 | Chick Embryology: 7.1 Structure of Hen's egg. | 8 | | | -- |

| | | | | | | | | | |
|---|-------------|----------|----|---|--|---|--|---|-----------------------------|
| 5 | Oct 2021 | 1 & 2 | 12 | 8 | Fundamentals of Developmental Biology: Definition and scope. Concepts in Developmental Biology: Growth, Differentiation, Dedifferentiation, Cell determination, Cell communication, Morphogenesis, Induction and Regeneration. Theories of Developmental Biology: Preformation, Pangenesis, Epigenesis. Axial gradient. Germplasm. Gametogenesis: Spermatogenesis & Structure of sperm with respect to human. 3.2 Oogenesis & Structure of ovum with respect to human. 3.3 Types of eggs. | 9 | Fundamentals of Developmental Biology: Definition and scope. Concepts in Developmental Biology: Growth, Differentiation, Dedifferentiation, Cell determination, Cell communication, Morphogenesis, Induction and Regeneration. Theories of Developmental Biology: Preformation, Pangenesis, Epigenesis. Axial gradient. Germplasm. Gametogenesis: Spermatogenesis & Structure of sperm with respect to human. 3.2 Oogenesis & Structure of ovum with respect to human. 3.3 Types of eggs. | 1 | Extra lecture was conducted |
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Signature of Teacher

Signature of Head of Department

Dr. J. P. Sarvade

M.Sc., Ph.D., F201

Head
Department of Zoology,
Arts, Science & Commerce College,
Indapur, Dist. Pune - 413103

Signature of Faculty In-charge

Incharge
Science Faculty
Arts, Science & Commerce
College, Indapur, Dist. Pune

Signature of the Principal

PRINCIPAL
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COMMERCE COLLEGE
INDAPUR-413106 DIST-PUNE

Name of the teacher: Prof Jamdade S.P.
Semester: I

Subject: Parasitology

Year: 2020-2021

| Part I : Teaching Plan | | | | | Paper: VI | | Class: T Y B Sc | | |
|------------------------|----------------|-----------|--------------------------------|-------------------------------------|--|--------------------------------|--|------------------------------|-----------------------------|
| 1 Sr. No. | 2 Month | 3 Week | 4 No. of working days | 5 No. of periods available | 6 Topics to be taught | 7 No. of periods engaged | Part II : Evaluation of Plan | | |
| | | | | | | | 8 Topics taught | 9 Deviation in periods | 10 Remarks |
| 1 | July 2021 | 2 & 4 | 11 | 8 | 1. Introduction, Scope and Branches of Parasitology: Definition: host, parasite, vector, commensalisms, mutualism and parasitism, Branches of parasitology. 2. Types of Parasites and Hosts: Ectoparasites, Endoparasites and its subtypes, Types of hosts - Intermediate, definitive, paratenic and reservoir. | 8 | 1. Introduction, Scope and Branches of Parasitology: Definition: host, parasite, vector, commensalisms, mutualism and parasitism, Branches of parasitology. 2. Types of Parasites and Hosts: Ectoparasites, Endoparasites and its subtypes, Types of hosts - Intermediate, definitive, paratenic and reservoir. | Nil | -- |
| 2 | August 2021 | 1 & 2 | 11 | 8 | 3. Host - Parasite relationship: Host specificity, Types of host specificity: structural specificity, physiological specificity and ecological specificity, Effects of parasite on host. 4. Study of Parasitic Protists: Entamoeba histolytica - Morphology, Life Cycle, Prevalence, Epidemiology, | 9 | 3. Host - Parasite relationship: Host specificity, Types of host specificity: structural specificity, physiological specificity and ecological specificity, Effects of parasite on host. 4. Study of Parasitic Protists: Entamoeba histolytica - Morphology, Life Cycle, Prevalence, Epidemiology, | 1 | Extra lecture was conducted |
| 3 | Sept 2021 | 1 & 2 | 12 | 8 | Pathogenicity, Diagnosis, Prophylaxis and Treatment, Plasmodium vivax - Morphology, Life Cycle, Prevalence, Epidemiology, Pathogenicity, | 8 | Pathogenicity, Diagnosis, Prophylaxis and Treatment, Plasmodium vivax - Morphology, Life Cycle, Prevalence, Epidemiology, Pathogenicity, Prophylaxis and Treatment. | Nil | -- |

| | | | | | | | | | |
|---|-----------|-------|----|---|---|---|---|---|-----------------------------|
| | | | | | Diagnosis, Prophylaxis and Treatment. | | | | |
| 4 | Sept 2021 | 3 & 4 | 12 | 8 | 5. Study of Parasitic worms: Ascaris lumbricoides - Study of Morphology, Life Cycle, Prevalence, Epidemiology, Pathogenicity, Diagnosis, Prophylaxis and Treatment, 5.3 Taenia solium (Tapeworm) - Study of Morphology, Life Cycle, Prevalence, Epidemiology, Pathogenicity, Diagnosis, Prophylaxis and Treatment | 8 | 5. Study of Parasitic worms: Ascaris lumbricoides - Study of Morphology, Life Cycle, Prevalence, Epidemiology, Pathogenicity, Diagnosis, Prophylaxis and Treatment, 5.3 Taenia solium (Tapeworm) - Study of Morphology, Life Cycle, Prevalence, Epidemiology, Pathogenicity, Diagnosis, Prophylaxis and Treatment | | |
| 5 | Oct 2021 | 1 & 2 | 12 | 8 | 6. Study of Parasitic Arthropoda: Morphology, pathogenicity and control measures of - Soft tick, Head louse, Rat flea, Bed bug | 9 | 6. Study of Parasitic Arthropoda: Morphology, pathogenicity and control measures of - Soft tick, Head louse, Rat flea, Bed bug | 1 | Extra lecture was conducted |

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Signature of Teacher

Signature of Head of Department

Dr. J. P. Sarwade
M.Sc., Ph.D., FZSI
Head
Department of Zoology,
Arts, Science & Commerce College,
Indapur, Dist. Pune - 413106

Signature of Faculty In-charge

Science Faculty
Arts, Science & Commerce
College, Indapur, Dist. Pune

Signature of the Principal

PRINCIPAL
ARTS, SCIENCE AND
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INDAPUR-413106 DIST-PUNE

Arts, Science and Commerce College, Indapur, Dist. Pune
TEACHING AND EVALUATION PLAN

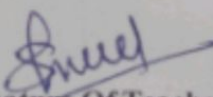
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|--|---------------|-----------------|
| Name of the teacher: Prof. Jamdade S.P. | Year: 2020-21 | Semester: VI |
| Subject: ZO 361 - Medical & Forensic Zoology | Paper: I | Class: T Y B Sc |

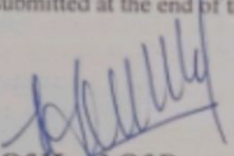
| Part I : Teaching Plan | | | | | | Part II : Evaluation of Plan | | | |
|------------------------|----------|-------|---------------------|--------------------------|--|------------------------------|--|----------------------|-----------------------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Sr. No. | Month | Week | No. of working days | No. of periods available | Topics to be taught | No. of periods engaged | Topics taught | Deviation in periods | Remarks |
| 1 | Nov 2020 | 3 & 4 | 9 | 8 | 1. Introduction to medical zoology and its importance 2. Medico-legal Autopsy: Death and its Causes- External examination of deceased body – Internal Examination - Determination of time since death and cause of death, Injuries – Classification - Medico-legal aspects of injuries, Post-mortem changes - collection of post-mortem samples and Preservation. | 8 | 1. Introduction to medical zoology and its importance 2. Medico-legal Autopsy: Death and its Causes- External examination of deceased body – Internal Examination - Determination of time since death and cause of death, Injuries – Classification - Medico-legal aspects of injuries, Post-mortem changes - collection of post-mortem samples and Preservation. | Nil | --- |
| 2 | Dec 2020 | 1 & 2 | 12 | 8 | 3. Urine Analysis: Physical characteristics, abnormal constituents, renal failure, renal calculi, dialysis. 4. Non infectious Diseases: Causes, Types, Symptoms, Complications, Diagnosis and Prevention of | 10 | 3. Urine Analysis: Physical characteristics, abnormal constituents, renal failure, renal calculi, dialysis. 4. Non infectious Diseases: Causes, Types, Symptoms, Complications, Diagnosis and Prevention of Diabetes (Type I and II), Hypertension, | 1 | Extra lecture was conducted |

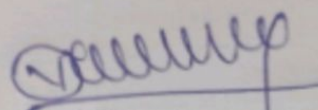
| | | | | | | | | | |
|---|--------------|-------|----|---|--|---|--|-----|-----|
| | | | | | Diabetes (Type I and II), Hypertension, Hypotension, Obesity, Atherosclerosis, Myocardial Infraction. | | Hypotension, Obesity, Atherosclerosis, Myocardial Infraction. | | |
| 3 | Dec 2020 | 3 & 4 | 11 | 7 | 5. Infectious Diseases: Causes, Types, Symptoms, Complications, Diagnosis and Prevention of Tuberculosis and Hepatitis. 6. Introduction to Forensic Zoology: Definition, Scope and Application of Forensic Zoology, Forensic Laboratories in India, Basic Principles of Forensic Science with Examples | 8 | 5. Infectious Diseases: Causes, Types, Symptoms, Complications, Diagnosis and Prevention of Tuberculosis and Hepatitis. 6. Introduction to Forensic Zoology: Definition, Scope and Application of Forensic Zoology, Forensic Laboratories in India, Basic Principles of Forensic Science with Examples | Nil | --- |
| 4 | January 2021 | 1 & 2 | 11 | 8 | 7. Forensic Medicine: Introduction to Forensic Medicine: Definitions of Forensic Medicine, Medical Jurisprudence, Medical evidence documentations. 8. Forensic Analysis: Examination of Biological Materials: Examination of Hair, Fibres, Diatoms, plants materials, human tissues, Examination of Body Fluid: Blood, Semen and Saliva, Forensic Importance of Insects: Insects of forensic importance - indicators of time of death stages of insect development & comparative decomposition of human body - colonization - Evidence collection of insects - Territorial & Aquatic Insects. | 8 | 7. Forensic Medicine: Introduction to Forensic Medicine: Definitions of Forensic Medicine, Medical Jurisprudence, Medical evidence documentations. 8. Forensic Analysis: Examination of Biological Materials: Examination of Hair, Fibres, Diatoms, plants materials, human tissues, Examination of Body Fluid: Blood, Semen and Saliva, Forensic Importance of Insects: Insects of forensic importance - indicators of time of death stages of insect development & comparative decomposition of human body - colonization - Evidence collection of insects - Territorial & Aquatic Insects. | Nil | --- |

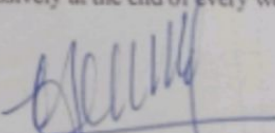
| | | | | | | | | | |
|---|--------------|-------|----|---|--|---|--|-----|-----|
| 5 | January 2021 | 3 & 4 | 12 | 8 | 8.4 DNA Fingerprint Technique and Examination of Biological Traces: Liquid blood, blood stains, & swabs, semen, Seminal stains, tissues, Bones, Hairs, Teeth, Saliva, Skeletal remains, Toxicological Investigations: Poisons – Definition, Forms of Poison – Physical, Chemical & Mechanical state. Introduction with examples of – Neurotoxic Poisons – Cerebral & Spinal, Cardiovascular Poisons, Asphyxiants, Miscellaneous poisons – Pesticides, Pharmaceutical drugs, Petroleum poisons, Food poisons, Radioactive poisons. | 8 | 8.4 DNA Fingerprint Technique and Examination of Biological Traces: Liquid blood, blood stains, & swabs, semen, Seminal stains, tissues, Bones, Hairs, Teeth, Saliva, Skeletal remains, Toxicological Investigations: Poisons – Definition, Forms of Poison – Physical, Chemical & Mechanical state. Introduction with examples of – Neurotoxic Poisons – Cerebral & Spinal, Cardiovascular Poisons, Asphyxiants, Miscellaneous poisons – Pesticides, Pharmaceutical drugs, Petroleum poisons, Food poisons, Radioactive poisons. | Nil | --- |
|---|--------------|-------|----|---|--|---|--|-----|-----|

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2. One copy of the plan should be submitted at the beginning of the term after filling up columns 1 to 6.
3. The second copy must be retained by the teacher and submitted at the end of the term. Part second of the plan i. e. columns 7 to 10 must be filled up progressively at the end of every week.


Signature Of Teacher


Signature Of Head Of Department
Dr. J. P. Sarwade
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Head
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Signature Of Faculty Incharge
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Arts, Science & Commerce
College, Indapur, Dist. Pune


Signature of Principal
PRINCIPAL
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INDAPUR-413106 DIST-PUNE

Name of the teacher: Prof Gunvare K.D.

Year: 2020-21

Semester: VI

Subject: ZO 362 - Animal Physiology

Paper: II

Class: T Y B Sc

| Part I : Teaching Plan | | | | | | Part II : Evaluation of Plan | | | |
|------------------------|----------|-------|---------------------|--------------------------|--|------------------------------|--|----------------------|---------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Sr. No. | Month | Week | No. of working days | No. of periods available | Topics to be taught | No. of periods engaged | Topics taught | Deviation in periods | Remarks |
| 1 | Nov2020 | 3 & 4 | 9 | 8 | 1. Nutrition and digestion: Nutritional requirement & balanced diet, Digestion and absorption of carbohydrates, proteins and lipids, Vitamins - outline of fat soluble and water-soluble vitamins; Sources, deficiency and diseases. 2. Respiration: Mechanism of respiration: Regulation of ventilation in lungs, exchange of gases at respiratory surface | 8 | 1. Nutrition and digestion: Nutritional requirement & balanced diet, Digestion and absorption of carbohydrates, proteins and lipids, Vitamins - outline of fat soluble and water-soluble vitamins; Sources, deficiency and diseases. 2. Respiration: Mechanism of respiration: Regulation of ventilation in lungs, exchange of gases at respiratory surface | Nil | --- |
| 2 | Dec 2020 | 1 & 2 | 12 | 8 | Respiratory pigments in animals: Haemoglobin, Hemocyanin, Hemerythrin, Chlorocruorin, Transport of gases : O ₂ and CO ₂ transport. 3. Circulation: Blood: Definition and its constituents, functions of blood, Heart: Structure of human heart, Pace maker, Cardiac Cycle, Origin and conduction of heart beat. | 10 | Respiratory pigments in animals: Haemoglobin, Hemocyanin, Hemerythrin, Chlorocruorin, Transport of gases : O ₂ and CO ₂ transport. 3. Circulation: Blood: Definition and its constituents, functions of blood, Heart: Structure of human heart, Pace maker, Cardiac Cycle, Origin and conduction of heart beat. | Nil | --- |

| | | | | | | | | | |
|---|-----------------|-------|----|---|--|---|--|-----|-----------------------------|
| 3 | Dec 2020 | 3 & 4 | 11 | 7 | 4. Excretion: Structure of Uriniferous tubule, Mechanism of urine formation, Normal and abnormal constituents of urine, Elementary idea of dialysis. 5. Muscles: Structure of smooth, skeletal and cardiac muscles. | 8 | 4. Excretion: Structure of Uriniferous tubule, Mechanism of urine formation, Normal and abnormal constituents of urine, Elementary idea of dialysis. 5. Muscles: Structure of smooth, skeletal and cardiac muscles. | I | Extra lecture was conducted |
| 4 | January 2021 | 1 & 2 | 11 | 8 | Mechanism of muscle contraction by Sliding filament theory. 6. Reproduction and Endocrine Glands: Physiology of male reproduction, hormonal control of spermatogenesis. | 8 | Mechanism of muscle contraction by Sliding filament theory. 6. Reproduction and Endocrine Glands: Physiology of male reproduction, hormonal control of spermatogenesis. | Nil | --- |
| 5 | January 2021 | 3 & 4 | 12 | 8 | Physiology of female reproduction, hormonal control of menstrual cycle, Structure and functions of pituitary, thyroid, parathyroid, pancreas and adrenal glands. | 8 | Physiology of female reproduction, hormonal control of menstrual cycle, Structure and functions of pituitary, thyroid, parathyroid, pancreas and adrenal glands. | Nil | --- |

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Signature of Principal

PRINCIPAL
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INDAPUR-413106 DIST-PUNE

Name of the teacher: Prof Jamdade S.P

Year: 2020-21

Semester: VI

Subject: Molecular Biology

Paper: III

Class: T Y B Sc

| Part I : Teaching Plan | | | | | | Part II : Evaluation of Plan | | | |
|------------------------|------------|-----------|--------------------------------|-------------------------------------|--|-----------------------------------|--|---------------------------------|---------------|
| 1 Sr. No. | 2 Month | 3 Week | 4 No. of working days | 5 No. of periods available | 6 Topics to be taught | 7 No. of periods engaged | 8 Topics taught | 9 Deviation in periods | 10 Remarks |
| 1 | Nov2020 | 3 & 4 | 9 | 8 | 1. Nucleic Acids and Chromatin: Structure of RNA & DNA, Types of RNA, DNA as genetic material - evidences (Griffith's, Avery et al., Hershey and Chase experiment), RNA as genetic material - TMV 4, Structure of Chromatin, packaging of DNA, Heterochromatin, Euchromatin. | 8 | 1. Nucleic Acids and Chromatin: Structure of RNA & DNA, Types of RNA, DNA as genetic material - evidences (Griffith's, Avery et al., Hershey and Chase experiment), RNA as genetic material - TMV 4, Structure of Chromatin, packaging of DNA, Heterochromatin, Euchromatin. | Nil | --- |
| 2 | Dec 2020 | 1 & 2 | 12 | 8 | 2. Central Dogma of Molecular Biology: DNA Replication - Semiconservative (Messelson and Stahl experiment), Basic mechanism of replication in prokaryotes and eukaryotes | 10 | 2. Central Dogma of Molecular Biology: DNA Replication - Semiconservative (Messelson and Stahl experiment), Basic mechanism of replication in prokaryotes and eukaryotes | Nil | --- |
| 3 | Dec 2020 | 3 & 4 | 11 | 7 | Transcription - Basic mechanism of transcription in prokaryotes and eukaryotes, RNA polymerase enzyme in prokaryotes. RNA modifications and processing (splicing - mRNA, modifications at 3' and 5' end). | 8 | Transcription - Basic mechanism of transcription in prokaryotes and eukaryotes, RNA polymerase enzyme in prokaryotes. RNA modifications and processing (splicing - mRNA, modifications at 3' and 5' end). | Nil | --- |

| | | | | | | | | | |
|---|--------------|-------|----|---|--|---|--|---|-----------------------------|
| 4 | January 2021 | 1 & 2 | 11 | 8 | Translation - Genetic code, properties of genetic code, Basic mechanism of Translation in E. coli and eukaryotic cells. 3. Lac operon: 4. DNA repair mechanism: Photo repair, dark repair, base excision repair. | 8 | Translation - Genetic code, properties of genetic code, Basic mechanism of Translation in E. coli and eukaryotic cells. 3. Lac operon: 4. DNA repair mechanism: Photo repair, dark repair, base excision repair. | 1 | Extra lecture was conducted |
| 5 | January 2021 | 3 & 4 | 12 | 8 | 5. Recombinant DNA Technology: Introduction, restriction enzymes, cloning vector, PCR (polymerase chain reaction), DNA finger printing. | 8 | 5. Recombinant DNA Technology: Introduction, restriction enzymes, cloning vector, PCR (polymerase chain reaction), DNA finger printing. | 1 | Extra lecture was conducted |

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Signature of Principal

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INDAPUR-413106 DIST-PUNE

Name of the teacher: Prof Dr. Salunkhe R.V.

Year: 2020-21

Semester: VI

Subject: Entomology

Paper: IV

Class: T Y B Sc

Part I : Teaching Plan

Part II : Evaluation of Plan

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---------|----------|-------|---------------------|--------------------------|--|------------------------|---|----------------------|---------|
| Sr. No. | Month | Week | No. of working days | No. of periods available | Topics to be taught | No. of periods engaged | Topics taught | Deviation in periods | Remarks |
| 1 | Nov2020 | 3 & 4 | 9 | 8 | 1. Fundamentals of Entomology: Definition and scope of Entomology, General Classification of Insects, General Characters of Insects. 2. Insect Morphology: Insect Integument and its derivatives, Insect Head, Head Orientations, Head articulations, Insect antennae and Mouth parts. | 8 | 1. Fundamentals of Entomology: Definition and scope of Entomology, General Classification of Insects, General Characters of Insects. 2. Insect Morphology: Insect Integument and its derivatives, Insect Head, Head Orientations, Head articulations, Insect antennae and Mouth parts. | | |
| 2 | Dec 2020 | 1 & 2 | 12 | 8 | 2.3 Insect Thorax, Insect Wing and modifications, Insect Leg and Modifications – a) Cursorial – Cockroach, b) Fossorial – Mole cricket, c) Saltorial – Grasshopper, d) Raptorial – Praying mantis, e) Pollen basket – Honey bee, Insect Abdomen, Genital and Pre – genital appendages of Grasshopper | 10 | 2.3 Insect Thorax, Insect Wing and modifications, Insect Leg and Modifications – a) Cursorial – Cockroach, b) Fossorial – Mole cricket, c) Saltorial – Grasshopper, d) Raptorial – Praying mantis, e) Pollen basket – Honey bee, Insect Abdomen, Genital and Pre – genital appendages of Grasshopper 3. Insect Anatomy (Grasshopper): Digestive System, Circulatory System | Nil | --- |

| | | | | | | | | |
|---|-----------------|----------|----|---|--|---|--|-----|
| | | | | | 3. Insect Anatomy (Grasshopper): Digestive System, Circulatory System | | | |
| | | | | | Nervous System, Respiratory System, Reproductive System. 4. Insect Ecology: Definition of Insect Ecology, Abiotic Factors (Photoperiod, Temperature and Humidity) and Biotic Factors (Food, Foraging and Nesting), Mimicry in insects with suitable examples. | | | |
| 3 | Dec 2020 | 3 & 4 | 11 | 7 | | 8 | Nervous System, Respiratory System, Reproductive System. 4. Insect Ecology: Definition of Insect Ecology, Abiotic Factors (Photoperiod, Temperature and Humidity) and Biotic Factors (Food, Foraging and Nesting), Mimicry in insects with suitable examples. | Nil |
| | | | | | 5. Insect Metamorphosis: Definition, Types and examples of Metamorphosis. 6. Insects as social groups: Definition & significance of Eusociality, Intraspecific and Interspecific relationships among insects. | | | |
| 4 | January 2021 | 1 & 2 | 11 | 8 | | 8 | 5. Insect Metamorphosis: Definition, Types and examples of Metamorphosis. 6. Insects as social groups: Definition & significance of Eusociality, Intraspecific and Interspecific relationships among insects. | Nil |
| | | | | | Social organization in Wasps and Termites. 7. Economic Importance of Insects: Insects in Research, Insects in Medicines and Cosmetics, Insects as Vectors, Insects as food. | | | |
| 5 | January 2021 | 3 & 4 | 12 | 8 | | 8 | Social organization in Wasps and Termites. 7. Economic Importance of Insects: Insects in Research, Insects in Medicines and Cosmetics, Insects as Vectors, Insects as food. | Nil |

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Indapur, Dist. Pune - 413108

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INDAPUR-413108 DIST-PUNE

Name of the teacher: Prof Prof Dr Salunkhe R.V.

Year: 2020-21

Semester: VI

Subject: ZO 365 - Techniques in Biology

Paper: V

Class: T Y B Sc

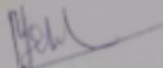
Part I : Teaching Plan

Part II : Evaluation of Plan

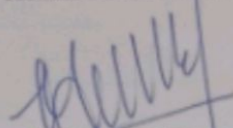
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---------|----------|-------|---------------------|--------------------------|--|------------------------|--|----------------------|-----------------------------|
| Sr. No. | Month | Week | No. of working days | No. of periods available | Topics to be taught | No. of periods engaged | Topics taught | Deviation in periods | Remarks |
| 1 | Nov2020 | 3 & 4 | 9 | 8 | 1. Microscopy: Definitions - Resolving Power, Limit of Resolution and Magnification, Numerical Aperture. Basic principle of microscopes - Light, Fluorescence, Phase Contrast, Stereo Microscope, SEM and TEM. 2. Microtomy: Tissue fixation and Processing, Methods of tissue fixation: Chemical fixation and physical fixation, Procurement of tissue and importance of fixation of tissues, Dehydration, clearing, impregnation, embedding and block making. | 8 | 1. Microscopy: Definitions - Resolving Power, Limit of Resolution and Magnification, Numerical Aperture. Basic principle of microscopes - Light, Fluorescence, Phase Contrast, Stereo Microscope, SEM and TEM. 2. Microtomy: Tissue fixation and Processing, Methods of tissue fixation: Chemical fixation and physical fixation, Procurement of tissue and importance of fixation of tissues, Dehydration, clearing, impregnation, embedding and block making. | Nil | --- |
| 2 | Dec 2020 | 1 & 2 | 12 | 8 | Types of microtomes, Section cutting: steps and precautions, common faults in section cutting, reasons & remedies, Mounting and spreading of ribbons, General procedure for staining of sections, Demonstration of Nucleic acid (Feulgen Reaction). 3. Haematological Techniques: Total count of RBCs, WBCs and Differential count of WBCs and their significance, | 10 | Types of microtomes, Section cutting: steps and precautions, common faults in section cutting, reasons & remedies, Mounting and spreading of ribbons, General procedure for staining of sections, Demonstration of Nucleic acid (Feulgen Reaction). 3. Haematological Techniques: Total count of RBCs, WBCs and Differential count of | 1 | Extra lecture was conducted |

| | | | | | | | | | |
|---|--------------|-------|----|---|--|---|--|-----|-----|
| | | | | | Bleeding time, clotting time and their significanc | | WBCs and their significance, Bleeding time, clotting time and their significanc | | |
| 3 | Dec 2020 | 3 & 4 | 11 | 7 | 4. Immunological Techniques: Antigen-Antibody Interactions – Immunodiffusion, Principle & Working of ELISA, Raising Monoclonal Antibodies, Application of Immunological techniques in disease diagnosis. 5. Types of PCR & DNA Barcoding : | 8 | 4. Immunological Techniques: Antigen-Antibody Interactions – Immunodiffusion, Principle & Working of ELISA, Raising Monoclonal Antibodies, Application of Immunological techniques in disease diagnosis. 5. Types of PCR & DNA Barcoding : | Nil | --- |
| 4 | January 2021 | 1 & 2 | 11 | 8 | 6. Methods in Biodiversity: Introduction to sampling and sample size, Biodiversity Indices - Species richness, Simpson Diversity Index, Shannon Diversity Index, Measuring Biodiversity- Quadrat sampling, Transect sampling, Insect survey - Active (sweep netting, aquatic nets) and Passive methodology (Pit fall traps, Light traps). | 8 | 6. Methods in Biodiversity: Introduction to sampling and sample size, Biodiversity Indices - Species richness, Simpson Diversity Index, Shannon Diversity Index, Measuring Biodiversity- Quadrat sampling, Transect sampling, Insect survey - Active (sweep netting, aquatic nets) and Passive methodology (Pit fall traps, Light traps). | Nil | --- |
| 5 | January 2021 | 3 & 4 | 12 | 8 | 7. Instruments in Field Biology: Binoculars, GPS, Basic digital camera techniques: Camera lens - prime and kit lens, Aperture mode, Shutter mode, Megapixels, Telephoto lens, macro lens, Adapters for camera and microscopes, Mobile's camera. 8. Laboratory techniques: Microphotographic techniques - CCD and CMOS camera, digital camera, Software for image analysis - Image J and GIMP. | 8 | 7. Instruments in Field Biology: Binoculars, GPS, Basic digital camera techniques: Camera lens - prime and kit lens, Aperture mode, Shutter mode, Megapixels, Telephoto lens, macro lens, Adapters for camera and microscopes, Mobile's camera. 8. Laboratory techniques: Microphotographic techniques - CCD and CMOS camera, digital camera, Software for image analysis - Image J and GIMP. | Nil | --- |

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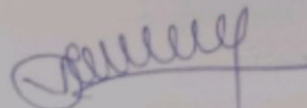
Signature Of Teacher



Signature Of Head Of Department

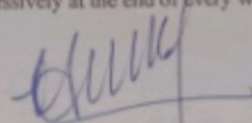
Dr. J. P. Sarwade

Head
Department of Arts,
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Signature of Principal
PRINCIPAL

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Name of the teacher: Prof. Mengade N.S.

Year: 2020-21

Semester: VI

Subject: ZO 366 - Evolutionary Biology

Paper: VI

Class: T Y B Sc

| Part I : Teaching Plan | | | | | | Part II : Evaluation of Plan | | | |
|------------------------|----------|-------|---------------------|--------------------------|--|------------------------------|--|----------------------|--------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Sr. No. | Month | Week | No. of working days | No. of periods available | Topics to be taught | No. of periods engaged | Topics taught | Deviation in periods | Remark |
| 1 | Nov2020 | 3 & 4 | 9 | 8 | 1. Introduction: Concept of Evolution, Origin of life, Origin of eukaryotic cell (Origin of mitochondria, plastids & symbionts). | 8 | 1. Introduction: Concept of Evolution, Origin of life, Origin of eukaryotic cell (Origin of mitochondria, plastids & symbionts). | Nil | --- |
| 2 | Dec 2020 | 1 & 2 | 12 | 8 | 2. Evidences of Evolution: Analogy and Homology, Embryological Evidences of Evolution, Evolutionary & Paleontological Evidences 3. Historical Review of Evolutionary Concept: Theories of Evolution, Lamarckism, Darwinism and Neo Darwinism. | 10 | 2. Evidences of Evolution: Analogy and Homology, Embryological Evidences of Evolution, Evolutionary & Paleontological Evidences 3. Historical Review of Evolutionary Concept: Theories of Evolution, Lamarckism, Darwinism and Neo Darwinism. | Nil | --- |
| 3 | Dec 2020 | 3 & 4 | 11 | 7 | Mutation Theory, Modern Synthetic theory. 4. Sources of Variations: Variation and Mutations 5. Isolation 6. Speciation: Types of speciation (Allopatric & Sympatric), Mechanism of speciation, Patterns of speciation. | 8 | Mutation Theory, Modern Synthetic theory. 4. Sources of Variations: Variation and Mutations 5. Isolation 6. Speciation: Types of speciation (Allopatric & Sympatric), Mechanism of speciation, Patterns of speciation. | Nil | --- |

| | | | | | | | | | |
|---|-----------------|-------|----|---|--|---|--|---|------------------------------|
| 4 | January 2021 | 1 & 2 | 11 | 8 | Factors influencing speciation. 7 Population Genetics: Hardy-Weinberg Law & Genetic Drift, Types of Natural Selection. | 8 | Factors influencing speciation. 7 Population Genetics: Hardy-Weinberg Law & Genetic Drift, Types of Natural Selection. | 1 | Extra lecture was conducted. |
| 5 | January 2021 | 3 & 4 | 12 | 8 | 8 Origin of Man: Evolution of Man (Evolution of anthropoids including man) - Kenyapithecus to Homo sapiens. 9 Zoogeographical Realms With reference to fauna 10 Extinctions: Extinction - An Overview. | 8 | 8 Origin of Man: Evolution of Man (Evolution of anthropoids including man) - Kenyapithecus to Homo sapiens. 9 Zoogeographical Realms With reference to fauna 10 Extinctions: Extinction - An Overview. | 1 | Extra lecture was conducted. |

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Name of the teacher: Prof. Mohite P.I.

Year: 2020-21

Semester: VI

Subject: Environmental impact assessment

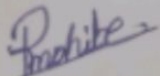
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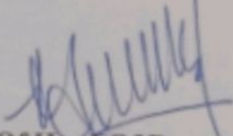
Class: T Y B Sc

| Part I : Teaching Plan | | | | | | Part II : Evaluation of Plan | | | |
|------------------------|----------|-------|---------------------|--------------------------|---|------------------------------|---|----------------------|---------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Sr. No. | Month | Week | No. of working days | No. of periods available | Topics to be taught | No. of periods engaged | Topics taught | Deviation in periods | Remarks |
| 1 | Nov2020 | 3 & 4 | 9 | 8 | Environment: Definition, Divisions, Importance. 2. Pollution: Definition and types, Impact on wildlife, natural resources, development. | 8 | Environment: Definition, Divisions, Importance. 2. Pollution: Definition and types, Impact on wildlife, natural resources, development. | Nil | --- |
| 2 | Dec 2020 | 1 & 2 | 12 | 8 | 3. Sustainable development: Definition and need, Exploitation of natural resources, Concept of carrying capacity, Three pillars of Sustainability, UN 17 Sustainable Development Goals (SDGs). 4. Overview of Environmental Protection acts: The Air (Prevention and Control of Pollution) Act 1981. The Water (Prevention and Control of Pollution) Act 1974. | 10 | 3. Sustainable development: Definition and need, Exploitation of natural resources, Concept of carrying capacity, Three pillars of Sustainability, UN 17 Sustainable Development Goals (SDGs). 4. Overview of Environmental Protection acts: The Air (Prevention and Control of Pollution) Act 1981. The Water (Prevention and Control of Pollution) Act 1974. | Nil | --- |
| 3 | Dec 2020 | 3 & 4 | 11 | 7 | The Environment Protection Act 1986, The National Green Tribunal Act 2010, Biological Diversity Act 2002. 5. Environmental Impact Assessment (EIA): Definition, need and importance of EIA, EIA notification 2006 - key elements, History and Evolution of EIA, Categories of Industries / establishments requiring EIA, Types of EIA - strategic EIA, regional EIA, | 8 | The Environment Protection Act 1986, The National Green Tribunal Act 2010, Biological Diversity Act 2002. 5. Environmental Impact Assessment (EIA): Definition, need and importance of EIA, EIA notification 2006 - key elements, History and Evolution of EIA, Categories of Industries / establishments requiring EIA, Types of EIA - strategic EIA, regional EIA, | Nil | --- |

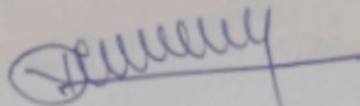
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|---|--------------|-------|----|---|---|---|---|-----|-----|
| | | | | | sectoral EIA, project level EIA and life cycle assessment, Rapid and comprehensive EIA. | | sectoral EIA, project level EIA and life cycle assessment, Rapid and comprehensive EIA. | | |
| 4 | January 2021 | 1 & 2 | 11 | 8 | 6. EIA Process: Screening, Scoping and consideration of alternatives, Baseline data collection, Impact analysis, Mitigation, Reporting, Public hearing, Review of EIA, Decision-making, monitoring clearance conditions. 7. Stakeholders in EIA process: Project proponent, Environmental consultant, CPCB / MPCB, Public, EIA agency (IAA). | 8 | 6. EIA Process: Screening, Scoping and consideration of alternatives, Baseline data collection, Impact analysis, Mitigation, Reporting, Public hearing, Review of EIA, Decision-making, monitoring clearance conditions. 7. Stakeholders in EIA process: Project proponent, Environmental consultant, CPCB / MPCB, Public, EIA agency (IAA). | Nil | --- |
| 5 | January 2021 | 3 & 4 | 12 | 8 | 8. Overview of Scheme for Accreditation of EIA Consultant Organizations (NABET / QCI): Eligibility and benefits, EIA coordinator (EC), Functional area experts (FAEs), Functional area associate (FAA) and team members: Role, educational qualification, experience and functions. | 8 | 8. Overview of Scheme for Accreditation of EIA Consultant Organizations (NABET / QCI): Eligibility and benefits, EIA coordinator (EC), Functional area experts (FAEs), Functional area associate (FAA) and team members: Role, educational qualification, experience and functions. | Nil | --- |

1. The plan should be prepared in duplicate.
2. One copy of the plan should be submitted at the beginning of the term after filling up columns 1 to 6.
3. The second copy must be retained by the teacher and submitted at the end of the term. Part second of the plan i. e. columns 7 to 10 must be filled up progressively at the end of every week.

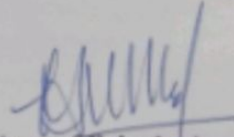

Signature Of Teacher


Signature Of Head Of Department

Dr. J. P. Sarwade
M.Sc., Ph.D., FZSI
Head
Department of Zoology,
Arts, Science & Commerce College,
Indapur, Dist. Pune - 413106


Signature Of Faculty Incharge

Incharge
Science Faculty
Arts, Science & Commerce
College, Indapur, Dist. Pune


Signature of Principal

PRINCIPAL
ARTS, SCIENCE AND
COMMERCE
INDAPUR-413106 DIST-PUNE

Name of the teacher: Prof. Pawar A.H
Semester: I

Year: 2021-22

Subject: Pest management

Paper: I

Class: T Y B Sc

| Part I : Teaching Plan | | | | | Part II : Evaluation of Plan | | | | |
|------------------------|----------------|-----------|--------------------------------|-------------------------------------|--|--------------------------------|--|------------------------------|-----------------------------|
| 1 Sr. No. | 2 Month | 3 Week | 4 No. of working days | 5 No. of periods available | 6 Topics to be taught | 7 No. of periods engaged | 8 Topics taught | 9 Deviation in periods | 10 Remarks |
| 1 | July 2021 | 2 & 4 | 11 | 8 | 1. Pest: Definition, Types of pests, Types of damages caused by the pest. 2. Pest management using Regulatory control: Quarantine, Eradication, Control districts, "Crop-free" periods. | 8 | 1. Pest: Definition, Types of pests, Types of damages caused by the pest. 2. Pest management using Regulatory control: Quarantine, Eradication, Control districts, "Crop-free" periods. | Nil | -- |
| 2 | August 2021 | 1 & 2 | 11 | 8 | 3. Pest management using Cultural control: Sanitation, Tillage, Crop rotation. Cropping systems. 4. Pest management using Biological control: Ecological considerations, Biological control of insects, Biological control of plant disease, Biological control of weeds. | 9 | 3. Pest management using Cultural control: Sanitation, Tillage, Crop rotation. Cropping systems. 4. Pest management using Biological control: Ecological considerations, Biological control of insects, Biological control of plant disease, Biological control of weeds. | 1 | Extra lecture was conducted |
| 3 | Sept 2021 | 1 & 2 | 12 | 8 | 5. Biotechnology approaches in pest management: Introduction. Recent advance in use of fungi and viruses. Methodology in Biotechnology, Somaclonal variability, Concept of Genetic engineering and Transgenic plants. | 8 | 5. Biotechnology approaches in pest management: Introduction. Recent advance in use of fungi and viruses. Methodology in Biotechnology, Somaclonal variability, Concept of Genetic engineering and Transgenic plants. | Nil | -- |
| 4 | Sept 2021 | 3 & 4 | 12 | 8 | 6. Integrated pest management (IPM): Principles and its components, Advantages and disadvantages, Biological control - | 8 | 6. Integrated pest management (IPM): Principles and its components, Advantages and disadvantages, Biological control - Predators, | | -- |