

DEPARTMENT OF ZOOLOGY
LESSION PLAN
SESSION 2023-24
SEMESTER – II

NAME OF TEACHER: DR. NITHAR RANJAN MADHU

PAPER ALLOTTED: DS-2, SECZOO2

| Month | Paper | Content | No of classes |
|------------------------------|---------|---|---------------|
| May 2024 (04.05.2024) | DS-2 | UNIT1: introduction to Coelomates Evolution of coelom and metamerism | 3 |
| | SECZOO2 | UNIT 3: Small scale and commercial broiler farming for meat | 4 |
| June 2024 | SECZOO2 | UNIT 4: Small scale and commercial layer farming for eggs | 6 |
| | SECZOO2 | UNIT 5: duck and quail farming Duck farming for eggs and meat Quail farming for eggs and meat | 6 |
| July 2024 | SECZOO2 | UNIT 6:poultry breeds and breeding | 6 |
| July 2024 | | REVISION CLASSES | 8 |
| August 2024 06.08.2024 | | Internal Examination & Class for Slow Learners | 7 |
| 20.08.2024 | | END SEMESTER EXAMINATION | |
| Total Classes | | | 40 |

NAME OF TEACHER: DR. SOUMOSISH PAUL

PAPER ALLOTTED: SECZOO2, MA - 2

| Month | Paper | Content | No of classes |
|-----------------------------|---------|---|---------------|
| May 2024 (04.05.2024) | SECZOO2 | Unit 1: Indian poultry industry Overview Importance and trends Farming Poultry Development Programme in India | 6 |
| June 2024 | SECZOO2 | Unit 2: Types of poultry farms Types of different farms | 6 |
| | MA-2(5) | Unit 7 Carbohydrate: Structure and Metabolism 8 Introduction to Carbohydrates, Structure & Types of Carbohydrates, Isomerism, Introduction to Intermediary metabolism: Glycolysis, Krebs cycle, Pentose phosphate pathway, Gluconeogenesis, | 4 |

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| | | Electron transport chain | |
| July 2024 | MA-2P | 4. Quantitative estimation of total protein in given solutions by Lowry's method. 5. Study of activity of salivary amylase under optimum conditions. | 4 |
| | MA -2P | 3. Qualitative tests to identify functional groups of carbohydrates in given solutions: Glucose (Benedict's test), Sucrose (Iodine test) | 6 |
| July 2024 | MA 2(5) | Unit-10 Enzymes 4 Introduction, Classification of Enzymes, Mechanism of action, Enzyme Kinetics, Inhibition and Regulation | 4 |
| August 2024 06.08.2024 | | Internal Examination & Class for Slow Learners | 4 |
| 20.08.2024 | | END SEMESTER EXAMINATION | |
| Total Classes | | | 34 |

NAME OF TEACHER: DR. PHULJHURI CHAKRABORTY

PAPER ALLOTTED: DS-2

| Month | Paper | Content | No of classes |
|---------------------------------------|--------------------------------|--|----------------------|
| May 2024 (04.05.2024) | DS-2 | Unit 6: Echinodermata General characteristics and Classification up to classes Water-vascular system in Asteroidea Larval forms in Echinodermata | 8 |
| May 2024 | Non-Chordate II Lab | 1. Study of following specimens: Annelids - Aphrodita, Nereis, Heteronereis, Sabella, Serpula, Chaetopterus, Pheretima, Hirudinaria Arthropods - Limulus, Palamnaeus, Palaemon, Daphnia, Balanus, Sacculina, Cancer, Eupagurus, Scolopendra, Julus, Bombyx, Periplaneta, termites and honey bees Onychophora - Peripatus Molluscs - Chiton, Dentalium, Pila, Doris, Helix, Unio, Ostrea, Pinctada, Sepia, Octopus, Nautilus Echinodermates - Pentaceros/Asterias, Ophiura, Clypeaster, Echinus, Cucumaria and Antedon Hemichordates- Saccoglossus | 10 |
| June 2024 | DS-2 | Unit 7: Hemichordata General characteristics of phylum Hemichordata. Phylogenetic relationship with non-chordates and chordates (only recent concept) | 8 |
| July 2024 | Non-Chordate II Lab | 4. Mount of mouth parts and dissection of digestive system and nervous system of Periplaneta 5. To submit a Project Report (mostly literature review) | 4 |
| August 2024 06.08.2024 | | Internal Examination & Class for Slow Learners | 4 |
| 20.08.2024 | | END SEMESTER EXAMINATION | |
| Total Classes | | | 34 |

NAME OF TEACHER: GOUTAM BISWAS

PAPER ALLOTTED: DS-2

| Month | Paper | Content | No of classes |
|------------------------------|------------------------|--|---------------|
| May 2024 (04.05.2024) | DS-2 | Unit 1: Introduction to Coelomates Evolution of coelom and metamerism | 4 |
| | DS-2 | 2: Annelida General characteristics and Classification up to classes Excretion in Annelida | 4 |
| June 2024 | Non-Chordate II Lab | 1. Study of following specimens: Annelids - Aphrodita, Nereis, Heteronereis, Sabella, Serpula, Chaetopterus, Pheretima, Hirudinaria Arthropods - Limulus, Palamnaeus, Palaemon, Daphnia, Balanus, Sacculina, Cancer, Eupagurus, Scolopendra, Julus, Bombyx, Periplaneta, termites and honey bees Onychophora - Peripatus Molluscs - Chiton, Dentalium, Pila, Doris, Helix, Unio, Ostrea, Pinctada, Sepia, Octopus, Nautilus Echinodermates - Pentaceros/Asterias, Ophiura, Clypeaster, Echinus, Cucumaria and Antedon Hemichordates- Saccoglossus | 10 |
| July 2024 | DS-2 | Unit 3: Arthropoda General characteristics and Classification up to classes Vision and Respiration in Arthropoda Metamorphosis in Insects Social life in bees and termites | 6 |
| | Non-Chordate II Lab | 4. Mount of mouth parts and dissection of digestive system and nervous system of Periplaneta 5. To submit a Project Report (mostly literature review) | 8 |
| | DS-2 | Unit 4: Onychophora General characteristics and Evolutionary significance | 2 |
| August 2024 06.08.2024 | | Internal Examination & Class for Slow Learners | 4 |
| 20.08.2024 | | END SEMESTER EXAMINATION | |
| Total Classes | | | 38 |

NAME OF TEACHER: DIPTAK CHAKROBORTY

PAPER ALLOTTED: DS-2, MA - 2

| Month | Paper | Content | No of classes |
|-----------------------------|------------------------|--|---------------|
| May 2024 (04.05.2024) | DS-2 | Unit 5: Mollusca General characteristics and Classification up to classes Respiration in Mollusca Torsion and detorsion in Gastropoda Pearl formation in bivalves Evolutionary significance of trochophore larva | 6 |
| June 2024 | Non-Chordate II Lab | 1. Study of following specimens: Annelids - Aphrodita, Nereis, Heteronereis, Sabella, Serpula, Chaetopterus, Pheretima, Hirudinaria Arthropods - Limulus, Palamnaeus, Palaemon, | 10 |

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|---------------------------|---------------------|--|----|
| | | Daphnia, Balanus, Sacculina, Cancer, Eupagurus, Scolopendra, Julus, Bombyx, Periplaneta, termites and honey bees Onychophora - Peripatus Molluscs - Chiton, Dentalium, Pila, Doris, Helix, Unio, Ostrea, Pinctada, Sepia, Octopus, Nautilus Echinodermates - Pentaceros/Asterias, Ophiura, Clypeaster, Echinus, Cucumaria and Antedon Hemichordates- Saccoglossus | |
| | MA-2(5) | Unit-5 Cardiovascular system 6 Composition of blood, Homeostasis, Structure of Heart, Origin and conduction of the cardiac impulse, Cardiac cycle | 4 |
| | MA-2P | 1. Preparation of haemin crystals 2. Identification of permanent histological sections of mammalian pituitary, thyroid, pancreas, adrenal gland, small intestine, liver, lung, kidney | 4 |
| June 2024 | Non Chordate II Lab | 2. Digestive system, septal nephridia and pharyngeal nephridia of earthworm 3. T.S. through pharynx, gizzard, and typhlosolar intestine of earthworm 4. Mount of mouth parts and dissection of digestive system and nervous system of Periplaneta 5. To submit a Project Report (mostly literature review) on any related topic to larval forms (crustacean, mollusc and echinoderm) | 10 |
| | MA 2(5) | Unit-6 Reproduction and Endocrine Glands 7 Physiology of male reproduction: hormonal control of spermatogenesis; Physiology of female reproduction: hormonal control of menstrual cycle. Structure and function of pituitary, thyroid, pancreas and adrenal | 4 |
| | MA -2P | 3. Qualitative tests to identify functional groups of carbohydrates in given solutions: Glucose (Benedict's test), Sucrose (Iodine test) | 4 |
| July 2024 | MA 2(5) | Unit-8 Lipid: Structure and Metabolism 5 Introduction to Lipids: Definitions; fats and oils; classes of lipids; Lipoproteins; Biosynthesis and β oxidation of palmitic acid | 4 |
| August 2024 | MA-2P | 4. Quantitative estimation of total protein in given solutions by Lowry's method. 5. Study of activity of salivary amylase under optimum conditions. | 4 |
| August 2024 06.08.2024 | | Internal Examination & Class for Slow Learners | 4 |
| 20.08.2024 | | End Semester Examination | |
| Total Classes | | | 54 |

NAME OF TEACHER: SHRINKA GHOSH

PAPER ALLOTTED: SECZOO2, MA -2

| Month | Paper | Content | No of classes |
|--------------------------|---------|--|---------------|
| May 2024 (04.05.2024) | SECZOO2 | UNIT 7: culling and Judging of Poultry Culling of birds for profitable Poultry Farming Judging of Poultry for better performance | 6 |

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|---------------------------------------|-----------------|---|-----------|
| June 2024 | SECZOO2 | UNIT 8: poultry diseases and their management Symptoms, treatment, prevention, control of different diseases. | 6 |
| | MA -2(5) | Unit-1 Nerve and muscle 8 1. Structure of a neuron, Resting membrane potential, Graded potential, Origin of Action potential and its propagation in myelinated and non-myelinated nerve fibres. | 4 |
| | MA – 2P | 1. Preparation of haemin crystals 2. Identification of permanent histological sections of mammalian pituitary, thyroid, pancreas, adrenal gland, small intestine, liver, lung, kidney | 6 |
| July 2024 | MA -2(5) | 2. Ultra-structure of skeletal muscle, Molecular and chemical basis of muscle contraction. Unit-2 Digestion 5 Physiology of digestion in the alimentary canal; Absorption of carbohydrates, proteins, lipids Unit-3 Respiration 5 Pulmonary ventilation, Respiratory volumes and capacities, Transport of Oxygen and carbon dioxide in blood | 6 |
| | MA -2(5) | Unit 6: Nucleus Structure of Nucleus: Nuclear envelope, Nuclear pore complex, Nucleolus Chromatin: Euchromatin and Heterochromatin and packaging (nucleosome) | 4 |
| | MA -2(5) | Unit-4 Excretion 5 Structure of nephron, Mechanism of Urine formation, Counter-current Mechanism | 5 |
| August 2024 06.08.2024 | MA -2(5) | Unit-9 Protein: Structure and metabolism 5 Proteins and their biological functions, functions of amino acids, physicochemical properties of amino acids. Peptides – structure and properties; primary structure of protein, secondary, tertiary and quaternary structures. Transamination, Deamination and Urea Cycle. | 5 |
| | | Internal Examination & Class for Slow Learners | 4 |
| 20.08.2024 | | END SEMESTER EXAMINATION | |
| Total Classes | | | 46 |