LESSON PLAN

NAME OF EXTENSION LECTURER: - Dr. Seema . CLASS B.Sc. (Life Science)

SUBJECT: ZOOLOGY SEMESTER 6th

PAPER (Zoo 6.1) ENTOMOLOGY

UNIT	MONTH	SUBJECT MATTER / SYLLABUS
1	JANUARY	Study of important insect pests of crops and vegetables: **Sugarcane:** With their systematic position, habits and nature of damage caused Life cycle and control of *Pyrilla perpusilla* only. (a) Sugarcane leaf-hopper (*Pyrilla perpusilla)* (b) Sugarcane Whitefly (*Aleurolobus barodensis)* (c) Sugarcane top borer (*Sciropophaga nivella)* (d) Sugarcane root borer (*Emmalocera depresellar* (e) Gurdaspur borer *(Bissetia steniellus)* **Cotton:** With their systematic position, habits and nature of damage caused. Life cycle and control of *Pectinophore gossypiella.* (a) Pink bollworm *(Pestinophora gossypfolla)* (b) Red cotton bug *(Dysdercus Cingulatus)* (c) Cotton grey weevil *(Myllocerus undecimpustulatus)* (d) Cotton Jassid *(Amrasca devastans)*
2	FEBRUARY	**Wheat:** Wheat stem borer (*Sesamia inferens*) with its systematics position. habits, nature of damage caused. Life cycle and control. **Paddy:** With their systematic position, habits and nature of damage caused. Life cycle and control of *Loptocorisa acuta.* (a) Gundhi bug *(Leptocorisa acuta)* (b) Rice grasshopper *(Hieroglyphus banian)* (c) Rice stem borer *(Scirpophaga incertullus)* (d) Rice Hispa *(Diceladispa armigera)*

3	**MARCH**	**Vegetables**Their systematics position, habits and nature of damage caused. Life cycle and control of *Aulacophora faveicollis*. (a) *Raphidopalpa faveicollis* – The Red pumpkin beetle. (b) *Dacus cucurbitas* – The pumpkin fruit fly. (c) *Tetranychus tecarius* – The vegetable mite. (d) *Epilachna* – The Hadda beetle. **Stored grains:**Their systematic position, habits and nature of damage caused. Life cycle and control of *Trogoderma granarium.* (a) Pulse beetle (*Callosobruchus maculatus)* (b) Rice weevil (*Sitophilus oryzae)* (c) Wheat weevil (*Trogoderma granarium)* (d) Rust Red Flour beetles (*Tribolium castaneum)* (e) Lesser grain borer *(Rhizopertha dominica)* (f) Grain & Flour moth *(Sitotroga cerealella)*
4	**APRIL/MAY**	**Insect control:** Biological control, its history, requirement and precautions and feasibility of biological agents for control. **Chemical control:** History, Categories of pesticides. Important pesticides from each category to pests against which they can be used. Insect repellants and attractants. Integrated pest management. Important bird and rodent pests of agriculture & their management.

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LESSON PLAN

NAME OF EXTENSION LECTURER: – Dr. Seema CLASS B.Sc. (Life Science)

SUBJECT: ZOOLOGY SEMESTER 6th

PAPER (Zoo 6.2) **DEVELOPMENTAL BIOLOGY**

UNIT	MONTH	SUBJECT MATTER / SYLLABUS
1	JANUARY	Historical perspectives, aims and scope of developmental biology. Generalized structure of mammalian ovum & sperm. Spermatogenesis and Oogenesis.
2	FEBRUARY	Fertilization, parthenogenesis, different types of eggs and patterns of cleavage in invertebrates and vertebrates. Process of blastulation in invertebrates and vertebrates Fate-map construction in frog and chick.
3	MARCH	Gastrulation in invertebrates and vertebrates Gastrulation & formation of three germinal layers in frog and chick. Elementary knowledge of primary organizers.
4	APRIL/MAY	Extra embryonic membranes: structure & significance in birds and mammals. Concepts of competence, determination and differentiation. Concept of regeneration.

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LESSON PLAN

NAME OF EXTENSION LECTURER:Dr. SEEMA

CLASS B.Sc. (Life Science)

SUBJECT: ZOOLOGY(DSC)

SEMESTER 2ND

PAPER(24ZOOM402DS02) **ANIMAL DIVERSITY - II**

UNIT	MONTH	SUBJECT MATTER / SYLLABUS
1	**JANUARY**	Chordates : Salient features of chordates, principles of classification Protochordates : Type study of Herdmania
2	**FEBRUARY**	Pisces : General characters and classification upto classes. Types of scales and fins in fishes. Type study : Labeo
3	**MARCH**	Amphibia : General characters and classification upto classes Type study : Frog, Parental care in Amphibians Reptilia : General characters and classification upto classes
4	**APRIL/MAY**	Aves : General characters and classification upto classes Flight adaptations in birds, Archeopteryx as missing link Mammals : General characters and classification upto classes Type study : Rat

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LESSON PLAN

NAME OF EXTENSION LECTURER: Dr. SEEMA

CLASS: B.Sc. (Life Science)

SUBJECT: ZOOLOGY(MIC)

SEMESTER: 4th

PAPER: **(25ZOO404MV01) Animal Nutrition**

UNIT	MONTH	SUBJECT MATTER / SYLLABUS
1	JANUARY	Food Procurement: Autotrophs: Photosynthetic and Chemosynthetic; Heterotrophs: Herbivores, Carnivores, Omnivores, Insectivores, Cannibalism, Saprotrophs and Parasitism.
2	FEBRUARY	Organs of Digestion: Mouth/Buccal cavity and its glands; Stomach and its glands, Smal lintestine and its glands, Large intestine; Liver
3	MARCH	Nutritional Requirements: Balanced diet, Macro-nutrients, Micro- nutrients Carbohydrates, Proteins, Fats, Water and various related deficiency diseases.
4	APRIL/MAY	Energy requirement, Vitamins: Fat soluble and water soluble; various related deficiency diseases. Minerals: and various related deficiency diseases. Obesity and Anorexia.

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