BHARATHIAR UNIVERSITY, COIMBATORE
B.Sc. ZOOLOGY(COLLEGES) DEGREE COURSE

Note :
The revised syllabus for the candidates admitted from the academic year 2012-13 in B.Sc. Zoology degree programme for the papers Core Practical II: Based C4, C5 and C6, Elective 1-B: Pest and their Control - Paper I and Elective 1-B: Pest and their Control - Paper II are furnished below. There is no change in remaining papers.

Semester – IV

CORE PRACTICAL – II : BASED ON C4, C5 AND C6

ENVIRONMENTAL BIOLOGY

- Estimation of dissolved oxygen of river, pond, sewage and industrial effluent
- Estimation of salinity & PH and its relation to temperature
- Estimation of free Carbon-di-oxide of water samples
- Study of Intertidal, rocky, sandy and maddy shore fauna.
- Study of pond Ecosystem

SPOLTERS

Monitoring units of Earthquake and Tsunami.

DEVELOPMENTAL BIOLOGY

- Slides showing gametogenesis.
- Difference types of Eggs – Slides and Specimen
- Embryology of Frog - slides
- Chick Embryo whole mount 18, 24, 33, 48, & 72 hours.
- Placenta of Mammals – Pig, sheep, Man & Rabbit

BIOSTATISTICS

Frequency distribution of given samples to find out arithmetic mean, median mode range and standard deviation for a biological date (Variation between any two parameters (Height & Weight)

BIOINFORMATICS AND COMPUTER APPLICATION

Computer components, usage of computer internet and E-mail Download and study at least two samples of Genome sequences.

SPOLTERS

Parts of Computer, Copies of Genome, Sequences DNA and Proteins.

Elective I-B : PEST AND THEIR CONTROL - PAPER - I

UNIT – I

Introduction, definition and causes for insect assuming pest status
Classification of pest
Types of damage caused by pests
Importance of pest control
Pest survaivilance and forecasting and pest outbreak

UNIT – II

General characters, bionomics and control measures of following agricultural pests

Pests of paddy:

1. Tryporyza incertulus (Lepidoptera) 3. Orseolia oryzae (Diptera)
2. Hieroglyphus banian (Orthoptera) 4. Dicladis armigera (Coleoptera)

Pests of Wheat:

1. Anaphothrips sudanensis (Thysonoptera) 2.Odentodermis obesis (Isoptera)
3. Mythimana separate (Lepidoptera)

UNIT – III

General characters, Bionomics and control measures of following agricultural pests

Pests of sugarcane:

1. Chilo infuscatellus (Lepidoptera) 2. Pyrilla perpusilla (Hemiptera)
3. Aleurolovus barodensis (Hemiptera) 4. Scirphophaga nivella (Lepidoptera)

Pests of cotton:

1. Pectinophora gossypiella (Lepidoptera) 2. Aphuds gossypii (Hemiptera)
3. Earias vitella (Lepidoptera) 4. Dysdercus cingulatus (Hemiptera).

UNIT – IV

General characters, Bionomics and control measures of following agricultural pests

Pests of cereals:

1.Chilo partellus (Lepidoptera) 2. Antherigona soccata (Diptera).

Pests of Pulses:

1.Helicoverpa armigera (Lepidoptera) 2. Melanogromyza obtuse (Diptera)

Pests of vegetable:

1.Leucinodes orbonalis (Lepidoptera) 2. Pieris brassicae (Lepidoptera)

Pests of fruits:

1.Papilio demolues (Lepidoptera) 2. Daccus cucurbitae (Diptera).

UNIT – V

General characters, Bionomics and control measures of pests

Stored grain pests:

1.Tribolium castraneum (Coleoptera) 2.Sitophillus oryzae (Coleoptera)
3.Tricoderma granarium (Coleoptera).

House hold pests:

Bed bug, House fly, Human louse, Cockroach and Mosquitoes

REFERENCE BOOKS:

1. Text book of modern Entomology – Tembhare
2. Elements of economic Entomology – Dr. B. Vasantharaj David

Elective I-B : PEST AND THEIR CONTROL
PAPER - II

UNIT – I

Principles and methods of pest control using techniques such as mechanical, biological, ecological, cultural, genetic techniques – sterile male techniques, Quarantine, legislative measures.

UNIT – II

Classification of insecticides: Based on mode entry, mode of action, chemical nature-inorganic, organic compounds- DDT, Endosulfan, Fenitrothion, Malathion, Monocrotophous, Oxime Carbamates.

UNIT – III

Insecticide formulations and application technology: Dusting and dusters, sprayers – Mannually operated – Hydraulic sprayers, Power operated – Pneumatic sprayer, Aerosols, Fumigants, Baits.

UNIT – IV

Integrated Pest Management (IPM), Chemosterilants, Sex attractants, Pheromonal control.

UNIT – V

Pest other than insects – Rat, Crab, Snail, Birds – Peacock, Parrot.
Concept of host-pest interaction.

REFERENCE BOOKS:

1. Text book of modern Entomology – Dr. D.B. Tembhare

2. Elements of economic Entomology – Dr. B. Vasantharaj David