

**M.Sc., III SEMESTER  
HARD CORE PAPER– 2  
APPLIED ZOOLOGY**

**32 Hrs**

I

(a) Plant –Insect interaction – Origin of insect pests. Pests of major crops **8 Hrs** (Two examples from each) –Cereals, Pulses, Plantation, Fiber crops and Vegetables.

(b) Insect pest control- Cultural, chemical, Biological, Legislative, Hormonal, Genetic and Integrated Pest Management.

**II. Vectors and Communicable diseases: 8 Hrs**

Bio-ecology of vectors, mode of transmission of pathogen- Life cycle and control of Malaria, Leshmaniasis, Filariasis, Plague, Japanese encephalitis, Dengue, Yellow fever, KFD, Bird flu and Chikungunya.

**III Beneficial Insects 8Hrs**

(a) Races of silkworm, Diseases of silkworm and their control. Grainage practices. Uzi fly and its control.

(b) Lac insect and lac culture.

(c) Insects as a tool in forensic science.

(d) Venomous insects –and its applications.

**IV Fisheries : 8 Hrs**

(a) Fishery resources of India.

(b) Aquaculture practices in India with reference to Fish, Prawn and Oyster.

(c)

**APPLIED ZOOLOGY PRACTICALS**

**4x16=64 Hrs**

1. Study of vectors of diseases (Larva & Adult): 3 x 4 = 12

a) Anopheles,

b) Culex,

c) Aedes species.

2. Study of Adult mosquito bioassay of insecticide susceptibility (Demonstration). 1 x 4 = 4

3. Study of Larval bioassay of insecticide susceptibility – WHO Method. 1 x 4 = 4

4. Slides and specimens – Parasites & Vectors

(Pathogens of human Malaria, Filariasis, Leishmaniasis, Specimens of Cockroach, House fly, Bugs and pests of birds).	2 x 4 = 8
6. Agricultural pests (Cereals, Pulses and millets).	3 x 4 = 12
7. Silkworm larva, cocoons of non-mulberry silkworms, bivoltine Multivoltine silkworm cocoons, silkworm pests.	1 x 4 = 4
8. Honeybee mouth parts, pollen basket & sting apparatus Mounting.	1 x 4 = 4
9. Commercially important inland and marine fishes.	1 x 4 = 4
9. Fixing and presentation of dead insect by plastination Technique.	1 x 4 = 4
10. Field visits.	2 x 4 = 8

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### REFERENCES

- 1) Pedigo. L.P. (2002). Entomology and Pest Management. Prentice- Hall of India Pvt Ltd. New Delhi
- 2) Fenemore.P.G. (1992) Applied Entomology. Wiley Esteren Lted New Delhi.
- 3) Gullan P. J. and Cranston. (1994) The Insects : An outline of Entomology. Chapman and Hall London.

