

SEMESTER- V

Discipline Specific Elective Zoology DSE 1 BZO-E 501: APPLIED ZOOLOGY (Credits: Theory-4, Practicals-4) THEORY

Lectures: 60

M.M.: 70

UNIT-I

Introduction to Host-parasite Relationship and Epidemiology of Diseases: Host, Definitive host, Intermediate host, Parasitism, Symbiosis, Commensalism, Reservoir, Zoonosis, Transmission, Prevention and control of diseases: Tuberculosis, swine flu, typhoid, Rickettsiae and Spirochaetes, Brief account of *Rickettsia prowazekii*, *Borrelia recurrentis* and *Treponema pallidum*. (14 Lectures)

UNIT-II

Parasitic Protozoa and Helminthes: Life history and pathogenicity of *Entamoeba histolytica*, *Plasmodium vivax* and *Trypanosoma gambiense*, Life history and pathogenicity of *Schistosoma haematobium*, *Ancylostoma duodenale* and *Wuchereria bancrofti*. (12 Lectures)

UNIT-III

Insects of Economic and Medical Importance: Biology, Control and damage caused by *Helicoverpa armigera*, *Pyrilla perpusilla* and *Papilio demoleus*, *Callosobruchus chinensis*, *Sitophilus oryzae* and *Tribolium castaneum*; Safe storage of stored grains, Life cycle, medical importance and control of *Pediculus humanus corporis*, *Anopheles*, *Culex*, *Aedes*, *Xenopsylla cheopis*, *Phlebotomus argentipes*. (14 Lectures)

UNIT-IV

Animal Husbandry and Poultry Farming: Preservation and artificial insemination in cattle; Induction of early puberty and synchronization of estrus in cattle, Principles of poultry breeding, Management of breeding stock and broilers, Processing and, preservation of eggs. (12 Lectures)

UNIT-V

Fish Technology: Genetic improvements in aquaculture industry; Induced breeding and transportation of fish seed. (08 Lectures)

Note: The question paper shall consist of two sections (A & B). Section A shall contain ten short answer type questions of six marks each and student has to attempt any five questions in about 150 words each. Section B shall consist eight long answer type questions of ten marks each and student shall be required to attempt any four questions in detail. Questions shall be uniformly distributed from the entire syllabus. The previous year paper can be used as a guideline and the following syllabus should be strictly followed while setting the question paper.

SUGGESTED READINGS

1. Park, K. (2007). Preventive and Social Medicine. XVI Edition. B.B Publishers.
2. Arora, D. R and Arora, B. (2001). Medical Parasitology. II Edition. CBS Publications and Distributors.
3. Kumar and Corton. Pathological Basis of Diseases.
4. Atwal, A.S. (1986). Agricultural Pests of India and South East Asia, Kalyani Publishers.
5. Dennis, H. (2009). Agricultural Entomology. Timber Press (OR).
6. Hafez, E. S. E. (1962). Reproduction in Farm Animals. Lea & Fabiger Publisher
7. Dunham R.A. (2004). Aquaculture and Fisheries Biotechnology Genetic Approaches. CABI publications, U.K.
8. Pedigo, L.P. (2002). Entomology and Pest Management, Prentice Hall.