

Open Elective
MAHARSHI DAYANAND UNIVERSITY ROHTAK
DEPARTMENT OF ZOOLOGY
M.Sc. ZOOLOGY w.e.f. session 2016-17

Semester- II

Course no.: Zoo-16ZOO01

Course Title: Applied Zoology

M.M.: 80

Time: 3 Hr

Course Outcomes

- CO1:** To create acquaintance about economic and therapeutic importance of animals for humans *vis-à-vis* animal welfare.
- CO2:** Awareness about use of certain animals and their products for human welfare *vis-à-vis* animal welfare will be created.
- CO3:** Information regarding the animals that responsible for economic losses will also be acquainted.

Note: There shall be seven questions in total. One question will be compulsory (short answer type) covering the entire syllabus and remaining six questions will be set two from each unit. Students are required to attempt compulsory question and 04 more questions selecting at least selecting one from each unit.

Unit-I

Host – Definitive and intermediate, Parasitism, Symbiosis, Commensalism, Reservoir.
Transmission, prevention and control of diseases: Tuberculosis and Swine flu
Principles and applications of ECG, MRI, PET, and CAT.

Unit-II

Life history and pathogenesis of *Plasmodium* sp.
Life history, Medical importance and control of *Aedes* sp.
Life history, pathogenesis and control of *Taenia* sp.
Principles and applications of brain activity recording, and pharmacological testing.

Unit-III

Preservation of gametes in animal and artificial insemination.
Principles and management of Poultry.
Introduction and management of pisciculture
Genetic improvement in animals; Induced breeding in aquaculture.

List of Recommended Books

1. Dent, D. Insect Pest Management
2. Hill, D.S., Timber Press. Agricultural Entomology
3. David, B. V. & Ananthkrishnan. General and Applied Entomology . T. N., TataMcGraw-Hill Publishing.
4. Asa C. Chandler, Clark P. Read, Introduction to Parasitology, John wiley and Sons., Inc.,New York.
5. Thomas W.M. Cameron, Parasites and Parasitism, Billing and Sons ltd. London,
6. Elmer R. Noble, Glenn A. Noble; Parasitology: The Biology of Animal Parasites, Lea and Febiger, Washington.
7. R.P. Hall, Protozoology, Prentice-Hall, Inc. Engtewood diffs. N.J. Charles E. Tuttle Company, Tokya
8. E.O. Wilson. The Diversity of Life (The College Edition), W.W. Northern & Co.
9. Molecular Biology of the Cell, B. Alberts, D. Bray, J. Lewis, M. Raff, K. Roberts and J.D. Watson. Garland Publishing Inc., New York.
10. Molecular Biology and Biotechnology. A comprehensive desk reference, R.A. Meyers (Ed.), VCH Publishers, Inc., New York.

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Semester- III

Course no.: Zoo-16Z0002

Course Title: Wild Life And Conservation

M.M.: 80

Time: 3 Hr

Course Outcomes

CO1: To explore the important concept of Wild Life and conservation.

CO2: It will enhance students understanding for betterment of diversified resources

CO3: Life forms for the sustainable natural resource utilization and better conservational measures with keen understanding and new approaches.

Note: There shall be seven questions in total. One question will be compulsory (short answer type) covering the entire syllabus and remaining six questions will be set two from each unit. Students are required to attempt question 1 and 4 more selecting atleast one from each unit.

Unit-I

Wildlife: Definition, significance and wildlife zones of the world and India, Protected Area Systems, Present status of National PA-Systems. Theory and Practice of Biosphere Reserves of the world: Biosphere Reserves of India. Natural Heritage sites, Wildlife and livelihood; Wildlife and illegal trade & control.

Unit-II

Wildlife Damage, electric fences for wildlife damage control, Basic electric fence design, Trench design, line trapping, Mist netting, Rocket netting Chemical capture: Equipment, Drugs, Plan of operation. Poaching: Its implications, conducting anti-poaching operations.

Unit-III

Wildlife conservation techniques, role of WWF, IUCN, UNEP, Red Data Book; Categories of Endangered Wildlife Species. National Projects: Project Tiger, Project elephant, Project Rhinoceros, Project Crocodiles.

List of Recommended Books

1. Techniques for wildlife Census in India by W.A. Rogers (A field manual); Wildlife Institute of India, Dehradun.
2. Wildlife Wealth of India by T.C. Majupuria; Tecpress Services, L.P., 487/42-SOL Wattenslip, Pratunam Bangkok, 10400, Thailand
3. Ali, S. Ripley S.D. Handbook of Birds of India, Pakistan 10-Vols. Oxford University Press, Bombay.
4. The Book of Indian Animals by S.H. Prater, BNHS-Publication, Bombay.
5. Wildlife in India by V.B. Saharia Natraj Publishers, Dehradun.
6. E.P. Gee, The Wildlife of India.