

Mother Teresa Women's University Kodaikanal

Common Paper Current Advances in Zoology

UNIT 1

The development of Animal form: Ontogeny, Morphology, Evolution,

Chemical signaling in the body: Signaling molecules and their control. Target Cells. Response to signals. Extrinsic signal. Molecular phylogeny genome mapping and Immune system in insects.

UNIT 2

Medical Zoology: Brief introduction to pathogenic microbes. Viruses, Rickettsiae, Spirochetes and bacteria. Pathogenic protozoans. Pathogenic helminths. Arthropods as a vector agents. Biodiversity of vector mosquitoes. Trends in diagnosis of Malaria, JE and Dengue. Chikungunia treatment. Genomics of Dengue virus and virus- host interactions. Insect vector control strategies.

Enzymic protective Mechanisms in the body: Blood clotting. Protection against ingested foreign chemicals. Protection of the body against its own proteases. Protection against reactive oxygen species.

UNIT 3

Biotechnology: Enzymology of Genetic engineering. Cloning Vehicles. Analysis and expression of cloned genes in host cell. Gene libraries. Changing genes. Application and impact of recombinant DNA technology. Ethical issues and biosafety regulation. Vermiwash production and applications. Production of transgenic insects and other animals.

UNIT 4

Insect Biotechnological Approaches: Mulberry Silkworm rearing: Chowki rearing, Late age, Shoot feeding and Branch feeding. Wild Silk Technology: Silkworm diversity and Silk Production. Bee Keeping: Pollination and Crop yield. Production technique for Microbial Control agents.

UNIT 5

Aquaculture: Philosophy and history of aquaculture, Different aquaculture practices in the world, Aquaculture in India, its potential and future, Economics of aquaculture in India, Problems of aquaculture.

Applied Limnology – Measurement: Case studies of Lake Washington, Lake Tahoe, Shagawa Lake. Case studies of Thames River, Nile River, Ganga river. Nutrient diversion, weed control. Management of water bodies. Pisces and Biological control of mosquitoes.

UNIT – 5a.

Plagiarism – Definition – History of Plagiarism – Key to avoid Plagiarism – Different forms of Plagiarism – Intentional – Unintentional – Non – Attribution – accidental – Common Plagiarism Problems – Six ways to avoid plagiarism in Research Report – Paraphrase – cite – Quoting – Citing Quotes – Citing one’s own material – Referencing – Plagiarism checker services – Softwares – write check – VAIIL Tutor Tool – Plagiarism Test – Pen and Paper plagiarism Knowledge Test – etc. UGC Public notice dated 01.09.2017

Recommended Reading:

1. Sathe, Sathe and Mahendra (2011)- Mosquito Borne Diseases. Mang. Pub., Delhi. pp 1-342.
2. Julian, Crampton and Paul (1991)- Insect molecular Science. Academic press, London.
3. Kawane and Sathe (2011)- Wild Silk Technology. DPH, New Delhi. pp 1-224.
4. Beament et al., (1964)- Advances in insect physiology vol.-2. Academic Press, London.