ZOE457: PARASITES AND DISEASES
Teaching Hours 10/Unit

UNIT- I

General Introduction, different types of animal association- parasitism and types of parasites, primary and secondary hosts, transmission of parasitic infection. Parasitic zoonosis, epidemiology of parasitic zoonosis, transmission. Host- parasitic interactions – parasitic effects benefiting the parasites, parasitic effects benefiting the host.

UNIT- II

Prasitic protozoans- Life cycle and Biology of (pathology and control measures also)

Mastigophora – *Trypanosoma, Leishmania, Giardia, Trichomonas*

Sarcodina- *Entamoeba, Lodamoeba*

Chilophora- *Balantidium*

Sporozoa- *Toxoplasma, Plasmodium,*

UNIT-III

Helminth parasites -

Life cycle and Biology (pathology and control measures also).

Nematoda- *Ancylostoma, Ascaris, Enterobius, Wuchereria, Onchocerca, Loa, Trichiuris.*

Trematoda- *Polystoma, Schistosoma, Echinostoma, Fascioloa*

Cestoda- *Taenia, Echinococcus, Dipylidium.*

UNIT-IV

Morphology, life history and medical importance of disease transmitting vectors-

Diptera- Culicoides, *Aedes, Culex, Anopheles,* House fly.

Siphonoptera: *Xenophylla, Ctenocephalides, Echidnophaga, Tunga*

Phthirptera – *Pediculus, Pthirus*

Hemiptera _ *Cimex, Triatoma*

Malaria, Chikungunya, Dengue fever (Transmission cycle).

UNIT-V

Morphology, life history and importance of Acarines-

Ticks: *Argas, Rhipicephalus, Boopilus, Haemaphysalis*

Mites: *Sarcoptes, Leptotrombidium, Psoroptes, Demdex, Dermanyssus*

Myasis- Venomous, Utricating and allergic arthropods- control measures.

Vecto status of Cockroach.

REFERENCES

1. Asa C. Chandler, (7th ed.), Introduction to Parasitology, With Special Reference to the Parasites of Man, New York: Wiley, 1944. 716 pp.
2. Despommier, Gwadz, Hotez, Knirsch: Parasitic Diseases (5th Ed). Apple Trees Productions, LLC. 2005. 375 pp.
3. William M. Samuel Margo J. Pybus A. Alan Kocan (2nd Ed). Parasitic Diseases of Wild Mammals, Iowa State University Press, Ames, Iowa, USA, 2008.
4. Stephen A. Berger, John Marr, Human Parasitic Diseases Sourcebook, Jones & Bartlett Learning, 2006. 537pp.
5. D Molyneux, Advances in Parasitology- Control of Human Parasitic Diseases, (1st Ed). Academic Press. 690 pp.
6. Jeremy Farrar & Peter Hotez & Thomas Junghanss & Gagandeep Kang & David Lalloo & Nicholas J. White. Manson's Tropical Diseases, (23rd Ed). Elsevier publication. 2013. 1360 pp.

ZOE457: PARASITES AND DISEASES- LABORATORY

4 Hours/Week

1. Parasitism and types of parasites, primary and secondary hosts, transmission of parasitic infection. Host- parasitic interactions – parasitic effects benefiting the parasites, parasitic effects benefiting the host.

2. Protozoal diseases

Life cycle, pathology, clinical manifestations and control measures for- *Trypanosoma, Leishmania, Giardia, Entamoeba, Plasmodium*

Demonstration of life cycle stages through charts, CD's, power point presentation and permanent slides.

3. Blood smear preparation for identification of malarial parasite

4. Fluorescent dye detection of malarial parasite

5. Helminth parasites

Life cycle, pathology, clinical manifestation of diseases and control measures for *Ancylostoma, Ascaris, Wuchereria, Trichiuris. Polystoma, Schistosoma, Echinostoma, Fascioloa*

Cestoda- *Taenia, Echinococcus.*

Demonstration of life cycle stages through charts, CD's, power point presentation and permanent slides. Important plant nematodes.

6. Parasites- Intestinal, Lymphatic system, Hepatic, Blood, Ectoparasites - Lab specimens

7. Habitat specificity – Intestinal parasites of cockroach.

8. Morphology, life history and medical importance of disease transmitting vectors-

Culicoides, *Aedes, Culex, Anopheles,* House fly. Malaria, Chikungunya, Dengue fever (Transmission cycle). Demonstration of life cycle stages through charts, CD's, power point presentation and permanent slides.

9. Identification of mosquitoes
10. Classification of blood meal from mosquito gut content
11. Field collection of vectors – types and dominance
12. Rat fever (*Leptospirosis*) Histopathology

Mangalore University
Department of Applied Zoology

Dr. Rajashekhar Patil
Professor
Chairman, BoS

13 July, 2016

The Registrar
Mangalore University
Mangalore

Sir,

Sub: CBCS Syllabus – incorporation of corrections

Pursuant to the discussions at the meeting of the Faculty of Science and Technology the following changes are incorporated

1. The title of the course is to be M.Sc. Zoology in keeping with the decision of the departmental council dated 5 September 2011 and the same being approved at the above meeting.
2. The eligibility guidelines provides for M.Sc. Zoology. Suitable corrections may please be made in the advertisement of M.Sc. Admissions for 2016-2017.
3. The scheme of question paper (both theory and practicals) is provided
4. Viva for dissertation is deleted.
5. A list of hard- and soft-core papers are provided
6. The title of paper Áquatic Biology' in III Semester is altered to 'Fisheries and Aquatic Biology'. The detailed syllabus of this paper is to be formulated.

Kindly do the needful to place the syllabus before the Academic Council.

Thanking you.

Yours faithfully,

Rajashekhar Patil