

ZOE457: PARASITES AND DISEASES

Teaching Hours 10/Unit

COURSE OUTCOME

1. This course mainly deals with different parasites that are responsible for various human diseases and their epidemiology and to introduce the students to current knowledge on the morphological features and life cycles of principal human parasites.
2. Outstanding progress will be achieved to understand serious parasitic infections caused by obligate parasites, facultative and opportunistic parasites.
3. To learn methods for accurate diagnosis of parasites responsible for food poisoning.
4. To know disease transmission processes.
5. Methods of prevention and to control the spread of these parasites.
6. This course is offered as an open elective choice for students from other departments who are interested in understanding different parasite born human infections and its control.

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

Parasitic protozoans- Life cycle and Biology of (pathology and control measures also)
Mastigophora – *Trypanosoma*, *Leishmania*, *Giardia*, *Trichomonas*
Sarcodina- *Entamoeba*, *Iodamoeba*
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*, *Trichuris*.
Trematoda- *Polystoma*, *Schistosoma*, *Echinostoma*, *Fasciola*
Cestoda- *Taenia*, *Echinococcus*, *Dipylidium*.

UNIT IV

Morphology, life history and medical importance of disease transmitting vectors-
Diptera- *Culicoides*, *Aedes*, *Culex*, *Anopheles*, House fly.
Siphonoptera: *Xenopsylla*, *Ctenocephalides*, *Echidnophaga*, *Tunga*
Phthiraptera – *Pediculus*, *Pthirus*
Hemiptera – *Cimex*, *Triatoma*
Malaria, Chikungunya, Dengue fever (Transmission cycle).

UNIT V

Morphology, life history and importance of Acarines-

Ticks: *Argas*, *Rhipicephalus*, *Boophilus*, *Haemaphysalis*

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

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

Vector status of Cockroach.

REFERENCES

1. Arora, D.R., Brij Bala Arora (2012). Medical Parasitology. 3rd Edition. CBS Publishers and Distributors Pvt Ltd. India.
2. Berger, S. A., Marr J. (2006) Human Parasitic Diseases Sourcebook, Jones & Bartlett.
3. Chandler, A. C. (1944) Introduction to Parasitology, With Special Reference to the Parasites of Man, 7th edition, New York, Wiley.
4. Despommier, Gwadz, Hotez, Knirsch (2005) Parasitic Diseases 5th edition, Apple Trees Productions, LLC.
5. Farrar, J., Hotez P., Junghanss T., Kang G. Laloo D. and White N. J. (2013) Manson's Tropical Diseases, 23rd edition. Elsevier publication.
6. Margo, W. M. S., Pybus J. And Kocan A. A. (2008). Parasitic Diseases of Wild Mammals, 2nd edition, Iowa State University Press, Ames, Iowa, USA.

