THEORY

INSECT, VECTORS AND DISEASES

(Credits 4)

Unit 1

Introduction to Insects
1.1 Classification of insects up to order level
1.2 Morphological features, Head - Eyes
1.3 Types of antennae
1.4 Mouth parts w.r.t. feeding habits

Unit 2

Insects as Vectors
2.1 Brief introduction of Carrier and Vectors (mechanical and biological vector)
2.2 Reservoirs, Host-vector relationship, Vectorial capacity, Adaptations as vectors
2.3 Host Specificity
2.4 Detailed features of orders with insects as vectors – Diptera, Siphonaptera,
   Siphunculata, Hemiptera

Unit 3

Dipteran as Disease Vectors
3.1 Dipters as important insect vectors – Mosquitoes, Sand fly, Houseflies
3.2 Study of mosquito-borne diseases – Malaria, Dengue, Chikungunya, Viral encephalitis,
   Filariais; control of mosquito
3.3 Study of sand fly-borne diseases – Visceral Leishmaniasis, Cutaneous
   Leishmaniasis, Phlebotomus fever; control of sand fly
3.3 Study of housefly as important mechanical vector, Myiasis, control of housefly

Unit 4

Siphonaptera, Siphunculata, Hemiptera as Disease Vectors
4.1 Fleas as important insect vectors; Study of Flea-borne diseases – Plague, Typhus fever,
4.2 Human louse (Head, Body and Pubic louse) as important insect vectors; Study of louse-
   borne diseases – Typhus fever, Relapsing fever, Trench fever, Vagabond’s disease,
   Phthiriasis;
4.3 Bugs as insect vectors; Blood-sucking bugs; Chagas disease, Bed bugs as mechanical
   vectors,
4.4 Control and prevention measures against diseases caused fleas, louse and bugs
INSECT VECTORS AND DISEASES

(CReditS 2)

PRACTICAL

1. Study of different kinds of mouth parts of insects

2. Study of following insect vectors through permanent slides/photographs:
   - Aedes, Culex, Anopheles, Pediculus humanus capitis, Pediculus humanus corporis, Phthihirus pubis, Xenopsylla cheopis, Cimex lectularius, Phlebotomus argentipes, Musca domestica, through permanent slides/photographs

3. Study of different diseases transmitted by above insect vectors

4. Submission of a project report on any one of the insect vectors and disease transmitted

SUGGESTED READINGS