

INSECT MORPHOLOGY AND SYSTEMATICS

ENTO 231

Credits 3(2+1)

Theory

1. History of Entomology in India.
2. Factors for insects abundance
3. Classification of phylum Arthropoda upto classes. Relationship of class Insecta with other classes.

MORPHOLOGY:

4. Structure and functions of insect cuticle and moulting.
5. Body segmentation. Structure and modifications of insect antennae, mouth parts and legs. Wing venation, modifications and wing coupling apparatus. Sensory organs.
6. Metamorphosis and diapause in insects.
7. Types of larvae and pupae.
8. Structure and functions of digestive system.
9. Circulatory
10. Excretory
11. respiratory,
12. nervous and
13. reproductive systems in insects.
14. Types of reproduction in insects.

SYSTEMATICS: 15. Taxonomy – importance, history and development and binomial nomenclature. Definitions of Biotype, Sub-species, Species, Genus, Family and Order.

16. Classification of class Insecta upto Orders.
17. Orthoptera-Acrididae

18. Dictyoptera-Mantidae

19. Odonata

20. Isoptera-Termitidae

21. Thysanoptera-Thripidae

22. Hemiptera - Pentatomidae, Coreidae, Pyrrhocoridae, Lygaeidae, Cicadellidae, Delphacidae, Aphididae, Coccidae, Aleurodidae, Pseudococcidae

23. Neuroptera-Chrysopidae

24. Lepidoptera-Noctuidae, Sphingidae, Pyralidae, Gelechiidae, Arctiidae

25. Coleoptera-Coccinellidae, Chrysomelidae, Cerambycidae, Curculionidae, Bruchidae, Scarabaeidae

26. Hymenoptera-Tenthredinidae, Apidae, Trichogrammatidae, Ichneumonidae, Braconidae

27. Diptera-Cecidomyiidae, Trypetidae, Tachinidae, Agromyziidae.