

B.Sc. Part-III

Paper-III : PRACTICAL

Max. Marks : 100
Time allowed : 6 Hours
(2 Session M&E)

1. External morphology, identification marks, nature of damage and host of the following pests:-
 - (i) **Sugarcane** : Sugarcane leaf-hopper, Sugarcane whitefly, Sugarcane top borer, Sugarcane root borer, Gurdaspur borer (any two).
 - (ii) **Cotton:** Red Cotton bug
 - (iii) **Wheat** : Wheat stem borer
 - (iv) **Paddy** : Gundhi bug, Rice grasshopper, Rice stem borer, Rice hispa (any one).
 - (v) **Vegetables:** *Aulocophora faveicollis*, *Dacus cucurbitas*, *Tetranychus tecarius*, *Epilachna* (any three).
 - (vi) **Pests of stored grains:** Pulse beetle, Rice weevil, Grain & Flour moth, Rust-red flour beetle, lessergrain borer (any three).
2. Stages of life history of silk moth and honey bee.
3. Identification of *Catle*, *Labeo rohita*, *L. calbasu*, *Cirrhius*, *mrigala* *Puntius sarana*, *Channa punctatus*, *C. marulius*, *C. stariatus*, *Trichogaster fasciata*, *Mystus seenghala*, *M. cavasius*, *M. tengra*, *Callichrous pabola*, *C. bimaculatus*, *Wallago attu*, *Prawns*, *Crabs*, *Lobsters*, *Calms*, *Mussels & Oysters*.
4. Chemical analysis of pond water and soil for pH, dissolved oxygen, free CO₂ nitrates, phosphates and chlorides.
5. A study of the slides of fish parasites.
6. A study of the different types of nets, e.g., cast net, gill net, drift net and drag net.
7. A visit to lake/reservoir/fish breeding centre.
8. Adaptative modifications in feet and breaks of birds.
9. Preparation of permanent/temporary slides of developmental stages of frog/mosquito.
10. Study of permanent slides of WM of chick embryo (13-18h, 24-36h, 36-48h, 48-72h).
11. Window preparation and identification of stages of development in chick egg.
12. **Histology:** Preparation of permanent histological slides of testis, ovary, kidney, intestine, live of rat (H and E staining).

