

**B.Sc ZOOLOGY SYLLABUS UNDER CBCS
FOR VI ..SEMISTER**

ELECTIVE - VI B

SILKWORM BREEDING AND SEED PRODUCTION TECHNOLOGY

BLOCK...1 .. SILKWORM BREEDING

Unit-1 ; **Introduction to silkworm breeding**- inbreeding and out breeding concepts- objectives of silkworm breeding-techniques- different types of breeding methods- line breeding, cross breeding and mutation breeding.

Unit-2 ; **Selection: Methods**- individual and mass selection- fixation of characters- evolution of new breeds- race authorization.

Unit-3 ; **Heterosis and hybrid vigour**-exploitation of heterosis in silkworm- concept of single, double and polyhybrids.

BLOCK...1 .. SILKWORM SEED PRODUCTION:

Unit-4 ; **Silkworm seed, Grainages** ; A general account of silkworm seed, grainages, Silkworm seed organisation; Basic seed multiplication centres-P4, P3, P2 and P1; maintenance of seed crops. Seed cocoon markets- Seed Legislation Act.

Unit-5 ; Pupal examination, certification of seed cocoon lots- price fixation for seed cocoons.

Unit-6 ; **Seed production grainages**- types of grainages- organisation and functions of grainages- plan for model grainage- grainage equipments and their use - Disinfection and hygiene in seed production units. Seed production plan.

Unit-7 ; **Seed cocoons** ; Procurement and transportation of seed cocoons- processing and preservation of seed cocoons- sex separation in seed cocoons.

Unit-8 ; **Moth** emergence and synchronisation; sex separation in moth; effect of improper synchronisation on egg hatching and quality-safe duration.

Unit-9 ; Coupling and decoupling; oviposition; method of egg production; refrigeration of male moths; mother moth examinations- individual and mass methods- dry moth examination; environmental conditions for grainage activity.

Unit-10 ; **Egg disinfection**- handling of multivoltine eggs-preservation of eggs to postpone hatching- ideal embryonic stages for cold storage- maximum duration of cold storage. Handling of bivoltine eggs for early hatching- physical and chemical methods- hot and cold acid treatment.

Unit-11 ; **Hatching** ; Postponement of hatching; hibernation schedule for 3, 4, 6 and 10 month's duration.

Unit-12 ; Preparation of loose egg- advantages- handling of loose eggs; Incubation of eggs.
