

**SYLLABUS FOR Pre-Ph.D
PAPER-II
SERICULTURE**

UNIT-I

- 1.1- Morphology of food plants of mulberry silk worms.
(Root, stem, leaf, flower, fruit and seed)
- 1.2- Biology of mulberry and non-mulberry silk worms (morphology, life cycle), silk gland
(structure, biosynthesis of silk, properties and composition)
- 1.3- Types of silk fibres (natural and synthetic) their properties, identification and use of
fibres, commercial characteristics of silk fibre
- 1.4- Sericulture organization setup and employment potential.

UNIT-II

- 2.1- Mulberry plantation and its establishment. (Propagation and planting system)
- 2.2- Package and practices for mulberry cultivation (rainfed and irrigated areas)
- 2.3- Grainage building, equipment's and their management
- 2.4- Processing and handling of eggs.

UNIT-III

- 3.1- Silk worm rearing requirements.
(Types of houses, appliances and environmental conditions)
- 3.2- Rearing technology for mulberry and non-mulberry silk worms.
- 3.3- Breeding approaches for evolving new races of silk worms.
- 3.4- Application of biotechnology in sericulture.

UNIT-IV

- 4.1- Mulberry and non-mulberry food plant diseases and its management.
- 4.2- Pests and Predators of mulberry and non-mulberry food plants and its management.
- 4.3- Mulberry and non-mulberry silk worm diseases and its management.
- 4.4- Pests and Predators of mulberry and non-mulberry silk worm and its management.

UNIT-V

- 5.1- Importance of reeling and processing (Cocoon to yarn)
- 5.2- Re-reeling doalbling, twisting, weaving, degumming and silk dying.
- 5.3- Raw silk testing and grading (importance and methods)
- 5.4- Value addition from sericulture by products as a entrepreneurship development.

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