**Semester- 6th**

**( Silk Reeling Technology)**

**DSE-16-SR-602**

**(Credits: Theory-04, Practicals-02)**

**Unit-I : Pre-Reeling operation-I**

1. Cocoon harvesting and transportation of Cocoons.
2. Optimum conditions for cocoon storage.
3. Cocoon sorting or assessment of cocoons.
4. Physical properties of cocoons.

**Unit-II : Pre-Reeling operation-II**

1. Stifling: Different methods of stifling their advantages and d is-advantages.
2. Cocoon cooking: Methods of cocoon cooking/boiling open-pan system and three-pan system.
3. Brushing: Hand and mechanical brushing of cocoons.
4. Quality of water for cocoon boiling/cooking.

**Unit III : Reeling Process**

1. Definition of Silk –Reeling: Different Methods country charkha, cottage machine and multi end reeling machine.
2. Reeling operation: Formation of reeling end, Jeetle boute, and coissures.
3. Quality of water for silk-reeling and impact of water on quality of silk.
4. Re-Reeling what are the advantages of re-reeling.

**Unit IV : Silk-throuling and weaving.**

1. Raw silk testing and grading: Methods of silk testing and grading.
2. Throuling preparation for lueisting, tuisting of yarn, soaking, drying and winding.
3. Chemical properties of silk yarns.
4. Silk by-products- Reeling waste and its utility in spun silk industry and utility of pupae.

**Practicals**

1. Identification of textile fibers by physical and chemical tests, microscopic examination, frame test and solubility test for polyester, cotton and silk.
2. Define cocoon percentage for cocoon lat.
3. Sinhle cocoon reeling –determination of average filament length and denier and shell ratio percentage of a sample cocoon.
4. Practical demonstration of multi end reeling machine.
5. Practical demonstration of cooking, reeling and re-reeling.
6. Reeling appliances used in silk reeling.
7. Visit to different reeling and weaving units of state and center for practical demonstration.