**SEMESTER-6**

**(Cocoon and Reeling Technology)**

**DSE-SR-16-603**

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

**Unit-I: Cocoon drying, sorting and cooking**

1. Objective of cocoon drying
2. Various methods of cocoon stifling/drying
3. Cocoon sorting and preservation. Objective of cocoon sorting and formulae
4. Cocoon cooking methods. Advantages and disadvantages

**Unit-II: Raw silk Reeling**

1. Introduction
2. Various reeling devices
3. Reeling operations : Formation of reeling end, jettebout, croissure, reels
4. Re-reeling: Object and re-reeling appliance

**Unit-III: Raw silk testing and grading**

1. Introduction
2. Types of tests: Qualitative test, Sample test and Quantitative test.
3. Raw silk grading/classification
4. Boil off test and exfoliation test

**Unit-IV: Silk throwing and weaving**

1. Introduction
2. Throwing preparation for twisting, Twisting of yarn, soaking, dressing, drying, winding, doubling and twisting.
3. Silk weaving: Warping, beaming, drawing denting, weft preparation, power loom and handloom weaving.
4. Chemical processing of silk yarns and fabrics: Degumming, bleaching, dyeing, printing of silk yarns and fabrics.

**PRACTICALS**

1. Study of cocoon sorting process:Identification of defective cocoons and their percentage in a lot
2. Identification of Textile fibres by physical and chemical tests—microscopic examinations, flame test and solubility test for polyester, cotton, silk.
3. Cocoon assessment: Determination of cocoon weight, shell weight and shell ratio of good cocoon.
4. Practical demonstration of cooking
5. Single cocoon reeling—determination of average filament length.
6. Reeling appliances: Study of Reeling and Re-reeling operations and devices.
7. Practical demonstration of multi-end silk reeling machine.
8. Study of silk fabric manufacturing unit power loom and handloom (visit to spun silk mill) during on the training.
9. Visit to various reeling and weaving units of state and centre for practical demonstration.