SRI KRISHNADEVARAYA UNIVERSITY: ANANTAPUR
DEPARTMENT OF SERICULTURE

CURRICULUM FOR B.Sc Z.S.C (Zoology, Sericulture & Chemistry) COURSE (SEMESTER PATTERN)

(Effective from the Academic Year 2015-2016)

B.Sc ZSC I Semester **60 Hours**

Paper – 1 - BIOLOGY OF MULBERRY & PRODUCTION TECHNOLOGY

Unit 1: **TAXONOMY & ANATOMY OF MULBERRY** 14 hrs

1. Botanical Description and taxonomical characters of Mulberry Varieties and Species.
2. Anatomy of Root (Primary & Secondary), Stem (Primary & Secondary), Petiole and leaf.
3. Influence of Environment on Mulberry growth and development.
4. Soil- Physical and Chemical Properties of soils, soil texture, soil structure and their classification in relation to mulberry growth red loamy soils, clay soils, sandy soils and black soils.

Unit 2: **MULBERRY PROPAGATION** 10 hrs

1. Asexual Propagation or Vegetative Propagation
   - Propagation by cuttings.
   - Grafting- Stem, Bud and root grafting.
   - Layering- Simple, Air, Trench.
2. Sexual Propagation
   - Propagation through seeds and seedlings preparation
3. Nursery Technology

Unit 3: **MULBERRY AGRONOMY -I**: 10 hrs

1. Factors of soil for mulberry growth
2. Mulberry cultivation. Selection of the Land- Preparation of the Land
3. Planting material
4. Methods of Planting-a) Pit system, b) Row system
5. Irrigation methods- Flatbed method, basin method, furrow method, sprinkler or over head method, drip irrigation.
6. Manuring

Unit 4: **MULBERRY AGRONOMY- II** 12 hrs

1. Inter Cultivation and Weeding, Systematic position of Common weeds of mulberry garden, Preventive & Control measures. Integrated Weed Control.
2. Methods of pruning- low cut, high cut, and middle cut, Head and non-head type of pruning.
3. Methods of leaf harvest- leaf picking, branch harvest and whole shoot harvest.
4. Preservation of Mulberry.

Unit 5: **PHYSIOLOGY OF MULBERRY**: 14 hrs

1. Brief Account of Photosynthesis; Carbon Fixation and their relation to leaf quality and productivity
2. Chemical Composition of Mulberry leaf. In relation to environmental conditions, soil conditions, cultural practices
3. Plant Nutrition- A. Macronutrients; Micronutrients their role in growth and respective deficiency syndromes.
4. Growth regulating substances and their application in improvement of mulberry.

PRACTICALS 45 Hours

1. TAXONOMY: Moraceae.

2. ANATOMY:
   1. T.S. Primary and Secondary Roots and Stems of Mulberry.
   2. Leaf and Petiole.

3. MULBERRY PROPAGATION:
   1. Stem cutting
   2. Nursery Preparation.
   3. Bud Grafting– Root Grafting - Layering

4. Collection of Mulberry seeds for Germplasm development

5. Land Preparation and mulberry plantation

6. Inter cultivation of mulberry

7. Morphology and systematic position of Common weeds of Mulberry.