

Core Course: Horticulture paper 1
Syllabus for B.Sc 1st Semester under Choice based credit system
Subject: Horticulture
(Credits: theory -4, practicals-2)
Effective from Academic Session 2016

Unit: I

- Scope and importance of horticulture with special reference of J & K.
- Classification of horticultural crops, horticulture zones of India.
- Origin of important temperature fruits grown in Kashmir.
- Area, production and productivity of rosaceous fruits in J & K with special reference to Apple, Pear, Peach, Almond and Apricot

Unit: II

- Soil fertility and factors affecting fertility.
- Essential micro and macro elements in fruit crops.
- Deficiency symptoms of essential micro-and macro-elements in fruit crops
- Evaluation of nutrient status of soils in orchards.

Unit: III

- Orchard layout and its types; square, rectangle, quincunx, hexagons, fencing of orchards.
- Preparation of field for raising horticultural crops.
- Spacing in orchard management (row to row and plant to plant), advantages and limitations.
- Planting techniques; Traditional and high density planting, precautions during plantation of fruit crops.

Unit: IV

- Nursery techniques and production of healthy plantation materials in temperate fruit crops- special reference to Apple, Pear, Peach, Almond and Apricot.
- Rejuvenation of old and senile orchards, factors influencing fruitfulness.
- Introduction of new exotic varieties and their impact on indigenous varieties and economy.
- Effect of non-fruit trees in and around the orchard.

Laboratory Exercise: L-01

- Study of various planning and layout of an orchard.
- Study of the morphological symptoms of mineral deficiency in horticultural crops.
- Field visit for fruit and leaf collection.
- Collection of soil sample from an orchard and its nutrient evaluations.
- Digging of pits for fruit plants.
- Estimation of soil moisture content, soil pH and Soil fertility.

Core Course: Horticulture paper 2
Syllabus for B.Sc 2nd Semester under Choice based credit system
Subject: Horticulture
(Credits: theory -4, practicals-2)
Effective from Academic Session 2016

Unit:I

- Classification of soils with respect to texture, Soil profiles.
- Physical and chemical properties of soil for horticultural crops.
- Role of soil pH and organic matter in temperate fruit production.
- Role of microbes in maintaining soil fertility for horticultural crops

Unit:II

- Types of fertilizers and their applications in horticultural crops.
- Concept of biofertilizers and their utility.
- Types of organic manures and their applications in horticultural crops, vermi-composting and green manuring.
- Organic fruit production, its Prospects and limitations.

Unit:III

- Irrigation practices of fruit orchards, conventional and modern methods.
- Importance of irrigation at critical stages of fruit crops.
- Harvesting and management of water for irrigation.
- Effect of water stress on horticultural fruit production.

Unit:IV

- Role of plant growth regulators in fruit production and ripening.
- Factors affecting fruit set and fruit production (light and temperature).
- Role of chilling in flowering and fruit set, chilling units for various fruits crops.
- Artificial fruit ripening substances-concerns and implications.

Laboratory Exercises: L+02

- Preparation of fertilizer mixtures and methods of application.
- Training and pruning of orchard trees, canopy management.
- Handling and training of various tools used in digging, cutting, pruning harvesting and storage.
- Determination of soil fertility and soil moisture content through standard techniques.
- Practical demonstration on drip and sprinkle irrigation.