AMAG11 CROP PRODUCTION TECHNOLOGY

UNIT-1 SOILS

1.1 Nature and origin of soil; soil forming rocks and minerals, their classification and composition, soil forming processes, classification of soils

1.2 Soil taxonomy orders; important soil physical properties; and their importance; soil particle distribution; soil inorganic colloids

1.3 Their composition, properties and origin of charge; ion exchange in soil and nutrient availability; soil organic matter

1.4 Its composition and decomposition, effect on soil fertility; soil reaction – acid, saline and sodic soils.

UNIT-2 QUALITY OR IRRIGATION WATER

2.1 Essential plants nutrients – their functions and deficiency symptoms in plants; important inorganic fertilizers and their reactions in soils.

2.2 Horticulture: Scope of horticultural and vegetable crops. Soil and climatic requirements for fruits, vegetables and floriculture crops, improved varieties.

UNIT-3 AGRONOMY

3.1 Definition and scope of agronomy.

3.2 Classification of crops, Effect of different weather parameters on crop growth and development.

3.3 Principles of tillage, tilth and its characteristics.

UNIT-4 SOIL WATER PLANT RELATIONSHIP AND WATER REQUIREMENT OF CROPS

4.1 Weeds and their control, crop rotation, cropping systems, Relay cropping and mixed cropping.

4.2 Garden tools, management of orchard, Extraction and storage of vegetables seeds.

UNIT-5 CRITERIA FOR SITE SELECTION

5.1 Layout and planting methods, nursery raising, macro and micro propagation methods, plant growing structures, pruning and training, fertilizer application,

5.2 Fertigation, irrigation methods, harvesting, grading and packaging, post-harvest practices.

Reference Books:

1. De, G.C. (1989). Fundamentals of Agronomy. Oxford & IBH Publishing Co Pvt Ltd, New Delhi.
2. Russel. Soil Condition and Plant Growth. ELBS, Longmans, U.K.