

ALIGARH MUSLIM UNIVERSITY, ALIGARH

FACULTY OF AGRICULTURAL SCIENCES

SYLLABUS FOR

M.SC. (AGRICULTURE) AGRONOMY

&

M.SC. (HORTICULTURE) FLORICULTURE AND LANDSCAPE

(1) General awareness in agriculture and related branches of science, life science and biological sciences.

(2) Floriculture and Landscape : Importance & scope of horticulture. Climatic zones of horticulture crops. Orchard establishment including high density planting. Propagation methods & root stocks. Training & pruning methods, use of PGR. Production technology of fruit crops. Importance & scope of vegetables. Classification of Vegetables. Package of practices of vegetables; Establishment of Ornamental garden, uses of tree, shrubs, climbers & seasonal flowers in garden. Importance & scope of spices, Aromatic, Medicinal and Plantation crops. Importance & Scope of Post-Harvest Technology of Horticulture crops & their Preservation. Principles and methods of preservation & fermentation. Preparation of jams, jellies, candies, chutney, pickle, ketchup and squashes. Preservatives and colours permitted and prohibited in India.

(3) Agronomy : Principles of Agronomy, crop ecology and geography and Agricultural Meteorology; Tillage, crop stand establishment and planting geometry and their effect on crop, Organic farming, precision farming, integrated farming systems, principles of field experimentation. Agro-ecological regions in India, Climatic factors and their effect on crop productivity, weather & climate, Atmospheric temperature and global warming. Field crops: Origin, distribution, economic importance, soil and climatic requirement, varieties, cultural practices and yield of cereals, pulses, oilseeds, fibre crops, sugar crops, fodder and foragecrops and commercial crops. Weed management: Principles of weed management, classification of weeds, crop weed competition and allelopathy, concepts and methods of weed control, IWM, classification, formulations. Water management: Principles of irrigation, water resources and irrigation development in India. Essential plant nutrients and their deficiency symptoms, slow release fertilizers, nitrification inhibitors, principles and methods of fertilizer application, INM, SSNM. Dryland Agronomy : Characteristics of Dryland farming and delineation, constraints of Dryland farming in India, Types of drought. Watershed management. Sustainable land use systems: Sustainable agriculture: parameters and indicators, conservation agriculture, safe disposal of Agri-

industrial waste, Agro-forestry systems, shifting cultivation, Alternate land use systems, Wastelands and their remediation for crop production.