

UNIT -I

INTRODUCTION TO MEDICINAL PLANTS: Introduction to medicinally important plant parts - fruits, leaves, stem and its modifications (underground and aerial), roots; Study of some medicinally important families with reference to systematic position; Diagnostic features and medicinal uses of Meliaceae, Solanaceae, Lamiaceae, Euphorbiaceae, Zingiberaceae.

UNIT -II

GENERAL METHODS OF PROCESSING OF HERBS: Identification and authentication of herbs; Different methods of processing of herbs like collection, harvesting, garbling, packing and storage; Methods of drying - natural and artificial drying methods with their merits and demerits; Methods of preparation of extracts - principles of extraction and selection of suitable extraction method; Different methods of extraction including maceration, percolation, hot continuous extraction, pilot scale extraction and supercritical fluid extraction with their merits and demerits; Purification and recovery of solvents.

UNIT -III

MEDICINAL PLANT CULTIVATION: Medicinal plant cultivation, Origin, Evolution and cultivation methods of medicinal plants - *Aloe vera*, Ashwagandha, Daruhaldi, Isapgol, Brahmi, Kalmegh, *Andrographis paniculata*, Moringa, *Tinispora cordifolia*, Shankpushpi, Thyme (Mint), Tulsi and Turmeric; Storage and protection, Marketing and utilization - export of medicinally important plants.

UNIT -IV

HERBAL COSMETICS: Cosmetics preparations - incorporating the herbal extracts in various cosmetic formulations like skin care preparations (creams and lotions), sunscreens and sunburn applications, hair care preparations (Hair oils and Hair shampoos) and beautifying preparations (lipsticks, face powders and nail polish); Skin care herbs - a) Lipids - Apricot, Ranolin, Beesay, Olive oil, Sesame oil (cleansing & emollient); b) Glycosides - Almond, Aloe, Ambi Holds, Rhubers, (emollient & skin pigmentation); c) Alkaloids - Black pepper, Vinca, Cinchona, Withania (anti pimples & ant cellulite).

UNIT-V

QUALITY CONTROL FOR MEDICINAL PLANTS: Quality Assurance: Concept of quality control, quality assurance & total quality controls; Sources of variation; Quality control of raw materials, pharmaceutical process & finished products; Documentation concepts of statistical quality control; Validation of pharmaceutical process (at least one case study of a process & analytical method); Contribution of National research laboratories (CDRI, CIMAP,RRC and NBRI) in medicinal plant research