

## MB-08

# PLANT RESOURCE UTILIZATION AND CONSERVATION

Units	Topics
I	<p><b>Plant biodiversity:</b> Concept, status in India, utilization and concerns.</p> <p><b>Sustainable development:</b> Basic concepts.</p> <p><b>Origins of agriculture.</b></p> <p><b>World centres of primary diversity of domesticated plants:</b> The Indo Burmese centre; plant introductions and secondary centres.</p>
II	<p><b>Origin, evolution, botany, cultivation and uses of</b> (i) Food, forage and fodder crops; (ii) fibre crops, (iii) medicinal and aromatic plants, and (iv) vegetable oil-yielding crops.</p> <p><b>Important fire - wood and timber-yielding plants and non-wood forest products (NWFPs)</b> such as bamboos, rattans, raw materials for paper making, gums, tannins dyes, resins and fruits.</p>
III	<p><b>Green revolution:</b> Benefits and adverse consequences.</p> <p><b>Innovations for meeting world food demands.</b></p> <p><b>Plant used as avenue trees</b> for shade, pollution control and aesthetics.</p> <p>Principles of conservation; extinctions; environmental status of plants based on International Union for Conservation of Nature.</p>
IV	<p><b>Strategies for conservation - in situ conservation:</b> International efforts and Indian initiatives; protected areas in India - sanctuaries, national parks, biosphere reserves, wetlands, mangroves and coral reefs for conservation of wild biodiversity.</p>
V	<p><b>Strategies for conservation - ex situ conservation:</b> Principles and practices; botanical gardens, field gene banks, seed banks, in vitro repositories, cryobanks; general account of the activities of Botanical Survey of India (BSI), National Bureau of Plant Genetic Resources (NBPGR), Indian Council of Agricultural Research (ICAR), Council of Scientific &amp; Industrial Research (CSIR), and the Department of Biotechnology (DBT) for conservation, nonformal conservation efforts.</p>