SAM GLOBAL UNIVERSITY

Established under Govt. of M.P. & Recognized by UGC

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Syllabus for entrance examination for admission in Ph.D
FORESTRY

Syllabus

Forest ecosystem concept, stand dynamics-forest succession, Measurement of tree parameters. Estimation of volume, growth and yield of individual tree and forest stands, Principles of forest management; scope and object of forest management, Forests and its importance, Afforestation programmes and forest conflicts, wildlife and human conflicts, important forest movements like Chipka Movement, Gender dimension of forest management, tribal economy and forests. Pastoralists and their dependence on forests. Forests and economic security of tribals. Agroforestry objectives, importance, potential and impediments in implementation.

Land capability classification and land evaluation. Overview of global agro-forestry systems, shifting cultivation, taungya system, multiple and mixed cropping, alley cropping, shelter-belts and windbreaks, energy plantations and homestead gardens. Concepts of community forestry and social forestry, linear strip plantations. Diagnosis and Design - Trends in Agroforestry systems research and development.

Soil and water management -objectives and scope in relation to agro-forestry systems. Soil and water conservation , Introduction and importance of nursery. Types of nurseries. Bare root, containerized and vegetatively produced nursery, Description of different forest based industries - paper and pulp, furniture, bamboo, sports goods, pencil making, match box and splint making, use of wood of lesser known forest species for commercial purposes. Forest policy - Relevance and scope; National Forest Policy - 1894, 1952 and 1988; General concept of forest tree breeding, tree improvement and forest genetics. Reproduction in forest trees, dimorphism pollination mechanisms. Concept of watershed management. Ideo-types of watershed development plans and activities for the watershed. Basic principles of economics applied to agro-forestry. Optimization techniques-Planting, budgeting and functional analysis.