

**Syllabus
for
Agribusiness Management
(COQP01)**

Note:

- i. *The Question Paper will have 75 questions.*
- ii. *All questions will be based on Subject-Specific Knowledge.*
- iii. *All questions are compulsory.*
- iv. *The Questions will be Bilingual (English/Hindi).*

Agribusiness Management (COQP01)

Agronomy and its scope:

Seeds and sowing, tillage and tilth, crop density and geometry, Crop nutrition, manures and fertilizers, nutrient use efficiency, water resources, soil-plant-water relationship, crop water requirement, water use efficiency, irrigation- scheduling criteria and methods, quality of irrigation water, logging.

Weeds:

Importance, classification, crop weed competition, concepts of weed management principles and methods, herbicides- classification, selectivity and resistance, allelopathy.

Crop Production Technology:

Rabi and Kharif crops, Farming System and Sustainable Agriculture, Sustainable agriculture-problems and its impact on agriculture, indicators of sustainability, adaptation and mitigation, conservation agriculture strategies in agriculture, Organic farming, principles and its scope in India; Precision agriculture: concepts and techniques; their issues and concerns for Indian agriculture

Genetics and Plant Breeding:

Importance and techniques. Mendelian principles of heredity, Architecture of chromosome; chromonematic, chromosome matrix, chromomeres, centromere, secondary constriction and telomere; special types of chromosomes. Chromosomal theory of inheritance- cell cycle and cell division- mitosis and meiosis. Genetics in relation to plant breeding, Principles of Seed Technology.

Pedological and ethnological concepts of soil; Soil genesis: soil forming rocks and minerals; weathering, processes and factors of soil formation; Soil Profile, components of soil; Soil physical properties, Problematic Soils and their Management

Agricultural Economics:

Meaning, definition, characteristics of agriculture, importance and its role in economic development. Agricultural planning and development in the country. Agricultural Finance- meaning, scope and significance, credit needs and its role in Indian agriculture. Agricultural credit: meaning, definition, need, classification.

Credit Analysis: 4R's and 3C's of credits. Sources of agricultural finance: institutional and non-institutional sources, market structure, marketing mix and market segmentation, GATT and WTO; Agreement on Agriculture (AOA) and its implications on Indian agriculture farm management principles, production functions, Consumer behavior analysis, Product Life Cycle (PLC). Sales & Distribution Management. Pricing policy, various pricing methods. Project Management definition, project cycle, identification. Introduction to Statistics and its Applications in Agriculture, Graphical Representation of Data, Measures of Central Tendency & Dispersion.

Introduction to Soil and Water Conservation, causes of soil erosion. Definition and agents of soil erosion, water erosion: Forms of water erosion. Soil loss measurement techniques. Principles of erosion control, Introduction to contouring, strip cropping. Contour bund.

Importance of plant diseases, scope and objectives of Plant Pathology:

Pathogenesis, Causes / factors affecting disease development: disease triangle and tetrahedron and classification of plant diseases. Important plant pathogenic organisms, different groups: fungi, bacteria, fastidious vesicular bacteria, phytoplasmas, Spiro plasmas, viruses, viroid's, algae, protozoa, phanerogamic parasites and nematodes with examples of diseases caused by them. Diseases and symptoms due to abiotic causes. IPM: Introduction, history, importance, concepts, principles and tools of IPM. Pests of Crops and Stored Grains and their Management

Plant propagation:-

Methods and propagating structures; Seed dormancy, Seed germination, principles of orchard establishment; Principles and methods of training and pruning Production Technology for Fruit and Plantation Crops Post-Harvest Management and Value Addition of Fruits and Vegetables

Rural Development: concept, meaning, definition; various rural development programmes launched by Govt. of India. Meaning, definition, concept & principles, Philosophy of C.D.

Rural Leadership:

Concept and definition, types of leaders in rural context; extension administration: meaning and concept, principles and functions. Meaning and process of communication, verbal and nonverbal communication

Mineral nutrition of Plants: Functions and deficiency symptoms of nutrients, nutrient uptake mechanisms; Photosynthesis: Light and Dark reactions, C3, C4 and CAM plants, Role of microbes in soil fertility and crop production, definitions of basic terms related to forestry, objectives of silviculture.

Important Indian and exotic breeds:

Breeds of cattle, buffalo, sheep, goat, swine and poultry. Improvement of farm animals and poultry.