FUTURE TOPPER

# Agriculture

Subject Code: 302

*Based on the Latest Official CUET (UG) 2026 Syllabus released by NTA For CUET (UG) 2027 Aspirants*

# Important Notes

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| **Syllabus Source** | This syllabus is reproduced from the official CUET (UG) 2026 syllabus published by the National Testing Agency (NTA). All topics are preserved verbatim. |
| **CUET 2027 Status** | As of preparation date, NTA has not released the official CUET 2027 syllabus. This document serves as the best available reference for CUET 2027 preparation. |
| **Verify Updates** | Always check **cuet.nta.nic.in** or **nta.ac.in** for the latest official notifications before your examination. |
| **Exam Pattern** | The Agriculture paper typically comprises 50 questions (40 to be attempted) in MCQ format. Confirm the exact pattern from the official NTA information bulletin. |
| **Marking Scheme** | Generally: +5 for correct answer, –1 for incorrect answer, 0 for unattempted. Verify with the official NTA bulletin. |
| **Preparation Tip** | Focus on NCERT textbooks as the primary source. Supplement with previous years' CUET papers and Future Topper practice material. |

# Agriculture — Complete Syllabus

## Unit 1: Agrometeorology, Genetics and Plant Breeding, Biochemistry and Microbiology

### 1. Agrometeorology

- Elements of weather: rainfall, temperature, humidity, wind velocity, sunshine.
- Weather forecasting; climate change in relation to crop production; climate classification; monsoon in India.

### 2. Genetics and Plant Breeding

- Cell and its structure; cell division – mitosis and meiosis and their significance.
- Organisation of genetic materials in chromosomes, DNA and RNA.
- Mendel's laws of inheritance; reasons for Mendel's success; absence of linkage in Mendel's experiments.
- Quantitative inheritance; continuous and discontinuous variation in plants.
- Monogenic and polygenic inheritance.
- Role of genetics in plant breeding; self and cross-pollinated crops; methods of breeding – introduction, selection, hybridisation, mutation and polyploidy; tissue and cell culture.
- History, importance, objectives and role of plant breeding; breeding methods in self and cross-pollinated crops.
- Plant Biotechnology – definition, scope in crop production, biotechnology of plant breeding.

### 3. Biochemistry

- pH and buffers; classification and nomenclature of carbohydrates, proteins, lipids, vitamins and enzymes; nucleic acids.

### 4. Microbiology

- Microbial cell structure; micro-organisms – algae, bacteria, fungi, actinomycetes, protozoa and viruses.
- Role of micro-organisms in respiration, fermentation and organic matter decomposition; soil flora and fauna.

### 5. Seed Science

- Seed structure of monocots and dicots; mode of reproduction, pollination, fertilisation.
- Seed dormancy; types of seeds.

## Unit 2: Livestock Production

### 1. Scope and Importance

- Importance of livestock in agriculture and industry; White Revolution in India.
- Important breeds – Indian and exotic; distribution of cows, buffaloes, goats, sheep and poultry in India.

### 2. Care and Management

- Systems of cattle and poultry housing; principles of feeding and feeding practices; balanced ration – definition and ingredients.
- Management of calves, bullocks, pregnant and milch animals, chicks, cockerels and layers, and poultry.
- Signs of sick animals; symptoms and control of common diseases: Rinderpest, black quarter, foot and mouth, mastitis, haemorrhagic septicaemia, coccidiosis, Fowl pox and Ranikhet disease.

### 3. Artificial Insemination

- Reproductive organs; collection, dilution and preservation of semen; artificial insemination and its role in cattle improvement.

### 4. Livestock Products

- Processing and marketing of milk and milk products.

### 5. Fisheries

- Definition of fish, fisheries, aquaculture; general characteristics of fish; types of fishes.

## Unit 3: Crop Production

### 1. Introduction

- Targets and achievements in foodgrain production since independence and future projections; sustainable crop production; commercialisation of agriculture.
- Classification of field crops: cereals, pulses, oil seeds, fibre, sugar and forage crops.

### 2. Soil, Soil Fertility, Fertilisers and Manures

- Soil pH, texture, structure, organisms, tilth, fertility and health.
- Essential plant nutrients, functions and deficiency symptoms.
- Soil types of India and their characteristics.
- Organic manure, common fertilisers (straight, complex, fertiliser mixtures), biofertilisers; integrated nutrient management.
- Problem soils; soil erosion; soil pollution; soil analysis for nutrient availability.

### 3. Irrigation and Drainage

- Sources of irrigation: rain, canals, tanks, rivers, wells, tubewells.
- Scheduling irrigation based on critical stages of growth, time interval, soil moisture content and weather parameters.
- Water requirement of crops; methods of irrigation and drainage; watershed management; irrigation water quality.

### 4. Weed Control

- Weed classification and characteristics; principles and methods of weed control: cultural, mechanical, chemical, biological and integrated weed management.

### 5. Crops

- Seedbed preparation, seed treatment, time and method of sowing/planting, seed rate.
- Dose, method and time of fertiliser application; irrigation; intercultural and weed control.
- Common pests and diseases (bacterial, fungal, viral, nematode) and their control; integrated pest management.
- Harvesting, threshing, post-harvest technology: storage, processing and marketing of major field crops – rice, wheat, maize, sorghum, pearl millet, groundnut, mustard, pigeon-pea, gram, sugarcane, cotton and berseem.
- Millets and their importance.

### 6. Modern Agriculture

- Challenges in modern agriculture; conservation agriculture; precision agriculture; natural farming; organic farming; remote sensing in agriculture.

## Unit 4: Horticulture

- Importance of fruits and vegetables in the human diet; crop diversification and processing industry.

- Orchard – location and layout; ornamental gardening and kitchen garden.
- Planting system, training, pruning, intercropping, protection from frost and sunburn.
- Trees, shrubs, climbers, annuals, perennials – definition and examples.
- Propagation by seed, cutting, budding, layering and grafting.
- Cultivation practices, processing and marketing of: Fruits – mango, papaya, banana, guava, citrus, grapes; Vegetables – radish, carrot, potato, onion, cauliflower, brinjal, tomato, spinach, cabbage; Flowers – gladiolus, canna, chrysanthemums, roses and marigold.
- Principles and methods of fruit and vegetable preservation.
- Preparation of jellies, jams, ketchup, chips and their packing.

# Disclaimer

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