

# RPSC Agriculture Officer Syllabus || Check Rajasthan AO, ARO Exam Pattern

## Rajasthan AO Exam Pattern

Paper	Subject	No. of Questions	Marks	Duration
1	Part-I General Hindi	60	180	
1	Part-II General Knowledge, History and Culture of Rajasthan	60	180	2 hours
2	Concerned Field/ Discipline	120	360	2 hours

## RPSC ARO Exam Pattern

S. No	Exam Type	Name of the subject	Questions	Marks	Exam Duration
1		Plant Pathology			
2	Written Exam	Entomology	100	100	2 Hours
3		Agronomy			
4		Agriculture Botany			

## Rajasthan Public Service Commission AO Syllabus Subject Wise

### Raj Agriculture Officer Syllabus for General Hindi

- वचन,
- विलोम.
- तत्सम एवं तद्भव.
- संधियां.
- कारक,
- वाक्यांशों के लिये एक शब्द निर्माण.
- वाक्यसंशोधन- लिंग, काल,
- वर्तनी,
- त्रुटि से संबंधित.
- समास.
- लोकोक्तियां एवं मुहावरे.
- अनेकार्थी शब्द
- अलंका.
- रस.

- पर्यायवाची.

### **RPSC AO Syllabus for राजस्थान का भूगोल (Geography of Rajasthan)**

- पशुधन
- खनिज सम्पदा
- राजस्थान के मुख्य भौतिक स्थितियां मरुस्थल प्रदेश
- प्राकृतिक वनस्पति
- राजस्थान की स्थिति, विस्तार
- खनिज सम्पदायें
- सिंचाई परियोजनाये
- अपवाह तंत्र
- जल संरक्षण
- कृषि

### **Rajasthan PSC Agriculture Officer Syllabus for Art, History, Literature, etc**

- Rights and Customs
- Geographical division, Climate, Major Mountains, Rivers
- Rajasthan's contribution to the Indian freedom struggle and the integration of Rajasthan
- Various Rajasthani dialects
- Women – Men's Clothing & Jewelry
- Agriculture, Animal Husbandry and Business Terminology
- History of Rajasthan – Civilizations
- Major Folk Festivals, Festivals
- Religious, historical and tourist places
- A folk tale, folk songs and dances, proverbs, folk theater, Folk music, and puppetry
- Different Castes – People
- Painting & Handicrafts
- Architecture – fort, palace, Havelis, chhatris, ponds, temple-mosques
- Prominent Personality – Maharaja Man Singh-first of Jaipur, Sawai Jai Singh, Maharaja of Bikaner Ganga Singh, Veer Durga Das, Maharaja Jaswant Singh, Rao Jodha, Rao Maldev, Maharana Pratap, etc.

### **RPSC AO Exam Syllabus for Concerned Field/ Discipline**

- Agro-climatic zones of India and Rajasthan
- Modern concepts in crop production, precision farming
- Plant nutrients – functions and deficiency symptoms, sources and their application
- Elements of crop production and effect on plant growth
- Organic manures, fertilizers, and bio-fertilizers, integrated nutrient management
- Soil fertility, soil productivity, and management
- Water-management: water requirement

- Forage and grassland and the consequences of their use
- Irrigation scheduling & efficiency, pressurized irrigation system
- Weed management: principles and practices
- Weather and climate, weather forecasting, aerospace and remote sensing in India
- Common herbicides and their uses in important grain crops, oils seeds, pulses, and fiber crops
- IWM in field crops, management of parasitic and aquatic weeds
- Problems of soil erosion in arid and semi-arid regions
- Agronomic practices in soil and water conservation
- Measures to prevent soil erosion
- Watershed: concept, objectives and principles, integrated watershed management
- Organic farming – objectives, and scope
- Dryland farming – role in the economy, aridity and their characteristics
- Role of agroforestry in soil and water conservation, silviculture, compatibility of crops
- Problems of seed germination
- Appraisal of the economics of farm forestry
- Soil physics-physical properties, moisture, air temperature
- Agronomy of important crops – cereals, pulses, oilseeds, fiber crops, forage crops, sugarbeet
- Recommended varieties of important crops of Rajasthan
- Soil classification and soil survey, land capability classification, soil taxonomy, soils of Rajasthan
- Constraints in dry farming areas, moisture conservation practices in dryland farming
- C/N ratio, symbiotic and non-symbiotic nitrogen fixation
- Physical chemistry of soil-colloids, soil reactions, buffering capacity
- Sources of charges and ion exchange of soil
- Soil microbiology- soil microbes, organic matter, humus fractions, structure, formation
- Transformation and mineralization of phosphorus, potassium, nitrogen, and sulfur in soil
- Straight fertilizers, mixed and compound fertilizers
- Secondary nutrients, micronutrients, liquid fertilizer
- Attacking soil fertility problem
- Fertilizer control order and adulteration
- Management of crops in problematic soils, quality of irrigation Water
- Soil and water conservation, pollution
- Olericulture – classification of vegetables, nursery, transplanting, seed testing, and storage
- Different styles of gardening, indoor gardening
- Lawn & hedge – layout, care and maintenance, annual flowers
- Cultivation of major cut flowers like rose, gladiolus, tuberose and chrysanthemum
- Management of problematic soils
- Pomology – the layout of orchards, propagation methods
- Post-harvest losses and principles of fruits and vegetable preservation, dehydration, jam, jelly, canning
- Insect pests spectrum in Rajasthan
- Role and importance of fungi, nematodes, viroids, phytoplasma & other micro-organisms in agriculture

- Management of insects and pests. Insecticide application, hazards and safety precautions
- Cultivation of mango, citrus, banana, guava, pomegranate, grapes, papaya, ber, phalsa, aonla, datepalm
- Insecticide formulations and their dilutions
- Detection of insect infestation in stored products and their management
- Assessment of crop losses and their implication in pest management
- Community campaign for white grub and other polyphagous pests management
- Rat control, management of ticks, mites, and household pests
- Integrated pest and disease management
- Essential plant nutrients and their role, major and micronutrients
- Insecticidal pollution, residues and tolerance limit
- Binomial nomenclature, morphology, and reproduction of fungi
- Methods of plant disease management
- Major diseases (fungal, bacterial, viral and nematode) of common field
- Vegetable and fruit crops of Rajasthan and their management
- Biological control methods and plant quarantine
- Methods of Plant Breeding for self, cross-pollinated and vegetatively propagated crops
- Mutation breeding, use of polyploidy in crop improvement, the concept of heterosis, type of hybrids
- DNA recombinant technology, transgenic crops and their scope
- Tissue culture techniques, seed testing, type of seeds
- Seed certification and seed standards for different crops
- Place of livestock in the national economy
- Important exotic and Indian breeds of cattle, buffalo, sheep, goat, and swine
- Feed resources of India with special reference to Rajasthan
- Reproductive behaviors like puberty, estrus, pregnancy, and parturition
- Measures and factor affecting fertility in livestock
- Milk secretion, milking of animals and factors affecting milk yield and composition
- Different livestock development programs of Government of India
- Selection and breeding of livestock for higher milk and meat production
- Classification of feedstuffs
- Conservation of feeds and fodder, hay and silage making
- Feeding and management of calves, growing heifers and milch animals
- Breed characteristics of poultry
- Housing principles, the space requirement for different species of livestock
- Disease control measures, sanitation, and care
- Natural and artificial insemination in farm animal, breeding, feeding and production records
- System of housing, feeding, and management in poultry
- Incubation, hatching, and brooding
- Vaccination and prevention of diseases in poultry
- Preservation and marketing of eggs, its economics and keeping quality
- Economics of livestock production
- Preparing dairy projects for financing
- Fish morphology and anatomy, osmoregulation, respiration in fish
- Limnology- water science, physicochemical and biological properties of water, lake-ecosystem
- Water pollution and various types of water bodies

- Different types of aquaculture systems and type of fisheries
- Peculiarities of Indian Agriculture, place of agriculture in the Indian economy, five-year plans
- Consumer behavior, demand, supply, demand schedule and supply schedule, market equilibrium
- Principles of farm management
- Agricultural finance and credit, credit institutions, cooperative Banks, crop insurance
- Agricultural development and poverty alleviation programs
- Linear programming, agricultural production functions- characteristics and optimizations
- Agriculture marketing, marketing functions and institutions, WTO, contract farming, future market
- Meaning and definition of extension education, philosophy of extension
- Process of extension education, basic concepts in extension
- Need assessment, benchmark survey, and PRA technique
- Program planning & evaluation, impact assessment
- Rural social institutions, caste, family and social groups
- Teaching-learning process, teaching methods
- Prices of agricultural commodities
- Use of audio-visual aids in training & communication process
- Organizing training, front line demonstrations, field days, Kisan Mela, exhibition, campaign
- Writing reports, radio talks, news, writing of farm literature and scientific information
- Classification of data, measures of central tendency, measures of dispersion
- Karl Pearson's measures of the correlation coefficient, linear regression,
- Theory of probability- addition and multiplication laws for two events
- General principles of designs of the experiment- CRD, RBD, LSD and factorial experiment
- Definition, classification and functions of carbohydrates, lipids, proteins, and amino acids
- Concept of sampling- simple random sampling, stratified random sampling, and systematic sampling
- Large sample test and small sample tests-'t', chi-square, F test
- Scope of farm mechanization in India
- Common workshop tools, survey instruments, bullock drawn implements, implements for field preparation, land leveling and sowing
- Measures of irrigation water, water lifting devices
- Oxidation of fatty acids and their synthesis. Vitamins, their types, and functions
- Enzymes- their classes, factors affecting activity, enzymes inhibition, active site, and enzyme cofactors
- Nucleotides, nucleic acids, their types and structure, transcription, translation, and DNA replication
- History and present programs of extension in India specially Shriniketan, Marthandom, Gurgaon experiment, Nilokheri project, Etawah pilot project
- Carbohydrate metabolism – Glycolysis, Krebs's cycle, Glyoxalate pathway
- Cultivation practice of cauliflower, cabbage, tomato, chilies, brinjal, carrot, radish, onion, pea, okra, muskmelon, watermelon, and sweet potato
- CDP, Panchayati Raj, NES, IVLP, IRDP, T&V system, RKVY, ATMA, MNREGA, ICDS, NDS, HYVP, IAAP, SGSY, JRY and PMRY with reference to their year of start, objectives, activities, achievement, and failure

## **RPSC Agriculture Research Officer (ARO) Syllabus & Exam Pattern**

### **PLANT PATHOLOGY**

- Mycology.
- Diseases of Crop Plants.
- Laboratory and Analytical Techniques.
- Principles of Plant Pathology.
- Plant Bacteriology.
- Plant Disease Management.
- History and Scope of Plant Pathology.
- Plant Virology.
- Epidemiology and forecasting of plant disease.
- Mushroom Production Technology

### **ENTOMOLOGY**

- Insect Taxonomy.
- Insect Toxicology.
- Biotechnology in Pest Management
- Insect Morphology.
- Beneficial Insects.
- Insecticides and their application.
- Insect Anatomy & Physiology.
- Urban and Storage Entomology.
- Insect Ecology.
- Insect Pest Management etc.

### **AGRICULTURE BOTANY**

- Cytology.
- Biotechnology
- Mutation breeding.
- Genetics.
- Plant Breeding.
- Breeding.
- Physiology.
- Mutation breeding.
- Heterosis breeding
- Plant genetic resources and seed technology.

### **AGRONOMY**

- Agriculture and Indian Economy.
- Monsoon.
- Cropping Systems.
- Role of water in Crop Production.
- Dry farming.
- Weeds.
- Agroclimatology.

- Post- Harvest Technologies.
- Compound Fertilizers.
- Agronomical Experiments
- Water Resources.
- Irrigation.
- Transformation in Soil.

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