

# **RAJASTHAN PUBLIC SERVICE COMMISSION, AJMER**

## **SYLLABUS FOR SCREENING TEST FOR THE POST OF ASSISTANT AGRICULTURE OFFICER, AGRICULTURE DEPARTMENT**

### **Part-A**

#### **General Knowledge of Rajasthan -30 Questions**

##### **History & Culture of Rajasthan:**

Historical Rajasthan: - Pre and Proto-historical sites of Rajasthan. Important historical centers of early Christian era. Prominent rulers of major Rajput dynasties of Rajasthan and their achievements & contributions – Guhilas- Sisodiyas, Chauhans, Rathores and Kachchawas.

Emergence of Modern Rajasthan: Agents of Social Awakening in Rajasthan during 19<sup>th</sup> and 20<sup>th</sup> Centuries. Political Awakening: role of newspapers and political institutions. Prajamandal movement in various princely states in 20<sup>th</sup> Century. Integration of Rajasthan.

Social Life in Rajasthan: Fairs and festivals; Social customs and traditions; attires and ornaments, Personalities of Rajasthan.

Art of Rajasthan: Architectural tradition of Rajasthan- temples, forts and palaces from ancient to modern period; various schools of paintings which developed during medieval period; Classical Music and Classical Dance, Folk Music & Instruments; Folk Dances & Drama.

Religious Life: Religious communities, Saints and Sects in Rajasthan. Folk deities of Rajasthan.

Language & Literature: Dialects of Rajasthani Language, Literature of Rajasthani language and Folk literature.

##### **Geography of Rajasthan:**

Major physiographic divisions of Rajasthan. Drainage characteristics. Weather conditions. Vegetation, forest and soil, Natural Resources, Minerals, livestock population of Rajasthan. Wild life and its conservation. Environmental Conservation, Droughts and Desertification, Major Irrigation Projects. Population growth and Tribes of Rajasthan, Handicrafts and Tourism. Development schemes in Rajasthan. Power resources with non-conventional energy sources.

## **Part-B**

**-120 Questions**

Agro-climatology-elements and effect on plant growth, weather abnormalities and protective measures. Elements of crop production, classification of crops, farming systems. Tillage, soil erosion, soil and water conservation. Soil productivity and fertility. Soil organic matter, fertilizers, their use and efficiency. Irrigation - role of water resources, quality of water and water pollution, water requirement of crops, methods of irrigation, drainage. Concept, scope and problems of dry land agriculture. Problem of weeds and control measures. Seed quality and certification. Agronomy of important crops like cereals, pulses, oilseeds, fibre crops, forage crops, sugarcane, sugarbeet, potato etc.

Objectives and methods of plant breeding. Mendel's laws of inheritance, heterosis mutations and gene concept. Seed testing, type of seeds, seed production, recommended varieties of important crops of Rajasthan.

Plant Growth Regulators. Management of abiotic stress and plant water relationship.

Nanoparticles and their importance in Agriculture.

Soil formation and profile development, basic ideas of soil survey and classification, soils of Rajasthan. Physical properties of soils, soil reaction, management of problematic soils, fixation of phosphorus, potassium and ammonium in soils. Essential plant nutrients and their functions, nutrient deficiency & toxicity symptoms, various tests to determine the nutrient requirement of plants. Symbiotic and non-symbiotic nitrogen fixation. Organic manures and bio-fertilizers, chemical composition of FYM, Vermicompost, night soil, oil cakes, bone meal, fish manure and common fertilizers.

Olericulture - Classification of vegetables, nursery, transplantation, seed testing and storage. Cultivation practices of cauliflower, cabbage, tomato, chillies, brinjal, carrot, radish, onion, pea, okra, muskmelon, watermelon and sweet potato. Importance of major seed species, medicinal and aromatic plants of Rajasthan. Hi-tech horticulture. Ornamental gardening, landscaping, Lawn and its maintenance, cultivation of roses, gladiolus, marigold. Pomology-layout of orchards, propagation methods, cultivation of mango, citrus, banana, guava, pomegranate, papaya, ber, phalsa, aonla, datepalm. Principles of fruits and vegetable preservation, dehydration, bottling, canning and packaging.

Importance of forestry, major species of forest trees and agro-forestry systems prevailing in Rajasthan.

Peculiarities of Indian agriculture, Importance of agriculture in national economy. Pattern of land utilization, size of holding, prices of agricultural commodities, agricultural marketing, functions & institutions, cost and price spread. Agricultural finance and credit, credit institutions, crop insurance. Farm planning and budgeting.

Philosophy and principles of extension education, rural social institutions, caste and family, rural leadership, teaching - learning process, audio-visual aids, teaching methods, programme planning and evaluation, communication process and diffusion theory. History of extension programmes in India viz; CD, IRDP, Panchayati Raj, HYVP, ATIC, IVLP, ATMA, NATP, NAIP, DRDA, M-NREGA, PMRY, KVK, JRY, SGSY, T&V System, Student READY programme etc.

Importance of animal husbandry in rural economy. Care and management of newly born calf, heifers, raising calves from 0-6 months, breeding bull and a cow before & after parturition. Common infectious & contagious diseases of livestock their prevention & control. Computation of balanced ration. Important Indian & exotic breeds of cow, buffalo, sheep, goat, camel & poultry. Housing of cattle and poultry. Forage conservation.

Common workshop tools, survey instruments, bullock drawn implements. Scope of farm mechanization in Rajasthan. Tools & implements for land preparation and leveling. Measurement of irrigation water, water lifting devices.

Data collection, summarization and presentation, measures of central tendency, measures of dispersion, Karl Pearson's coefficient of correlation. Experimental designs.

Major diseases (fungal, bacterial, nematode & viral) and insect pests of field, vegetable, fruit, ornamental and seed spice crops of Rajasthan and their control measures including biological methods & integrated pest management. Beneficial insects.

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**Pattern of Question Paper:**

1 Objective Type Paper

2 Maximum Marks: 150

3 Number of Questions: 150

4 Duration of Paper: 2.30 Hours

5 All Questions carry equal marks

6 Medium of Screening Test: Bilingual in English & Hindi

7 There will be **Negative Marking**

***(For every wrong answer, one-third of marks prescribed for that particular question will be deducted).***