

RAJASTHAN PUBLIC SERVICE COMMISSION, AJMER

SYLLABUS FOR SCREENING TEST FOR THE POST OF AGRICULTURE OFFICER, AGRICULTURE DEPARTMENT

प्रश्न पत्र – प्रथम

Part - I

GENERAL HINDI

- 1 दिये गये शब्दों की संधि एवं शब्दों का संधि-विच्छेद ।
- 2 उपसर्ग एवं प्रत्यय-इनके संयोग से शब्द – संरचना तथा शब्दों से उपसर्ग एवं प्रत्यय को पृथक् करना, इनकी पहचान ।
- 3 समस्त (सामासिक) पद की रचना करना, समस्त (सामासिक) पद का विग्रह करना ।
- 4 शब्द युग्मों का अर्थ भेद ।
- 5 पर्यायवाची शब्द और विलोम शब्द ।
- 6 शब्द शुद्धि – दिये गये अशुद्ध शब्दों को शुद्ध लिखना ।
- 7 वाक्य शुद्धि – वर्तनी संबंधी अशुद्धियों को छोड़कर वाक्य संबंधी अन्य व्याकरणिक अशुद्धियों का शुद्धीकरण ।
- 8 वाक्यांश के लिये एक उपयुक्त शब्द ।
- 9 पारिभाषिक शब्दावली – प्रशासन से सम्बन्धित अँगरेजी शब्दों के समकक्ष हिन्दी शब्द ।
- 10 मुहावरे – वाक्यों में केवल सार्थक प्रयोग अपेक्षित है ।
- 11 लोकोक्ति – वाक्यों में केवल सार्थक प्रयोग अपेक्षित है ।

Part - II

राजस्थान का सामान्य ज्ञान, इतिहास एवं संस्कृति

- 1 राजस्थान की भौगोलिक संरचना – भौगोलिक विभाजन, जलवायु, प्रमुख पर्वत, नदियां, मरूस्थल एवं फसलें ।
- 2 राजस्थान का इतिहास – *सभ्यताएं* – कालीबंगा एवं आहड़,
प्रमुख व्यक्तित्व – महाराणा कुंभा, महाराणा सांगा, महाराणा प्रताप, राव जोधा, राव मालदेव, महाराजा जसवंतसिंह, वीर दुर्गादास, जयपुर के महाराजा मानसिंह-प्रथम, सवाई जयसिंह, बीकानेर के महाराजा गंगासिंह
- 3 भारतीय स्वतंत्रता संग्राम में राजस्थान का योगदान एवं राजस्थान का एकीकरण ।
- 4 विभिन्न राजस्थानी बोलियाँ ।
- 5 कृषि, पशुपालन एवं व्यावसायिक शब्दावली ।
- 6 लोक देवी-देवता – प्रमुख संत एवं सम्प्रदाय ।
- 7 प्रमुख लोक पर्व, त्यौहार, मेले – पशुमेले ।
- 8 लोक कथा, लोक गीत एवं नृत्य, कहावतें, लोक नाट्य, लोक वाद्य एवं कठपुतली कला ।
- 9 विभिन्न जातियां – जन जातियां ।
- 10 स्त्री – पुरुषों के वस्त्र एवं आभूषण ।
- 11 चित्रकारी एवं हस्तशिल्पकला – चित्रकला की विभिन्न शैलियां, भित्ति चित्र, प्रस्तर शिल्प, काष्ठ कला, मृदमाण्ड (मिट्टी) कला, उस्ता कला, हस्त औज़ार, नमदे-गलीचे आदि ।
- 12 स्थापत्य – दुर्ग, महल, हवेलियां, छतरियां, बावड़ियां, तालाब, मंदिर-मस्जिद आदि ।
- 13 संस्कार एवं रीति रिवाज ।
- 14 धार्मिक, ऐतिहासिक एवं पर्यटन स्थल ।

प्रश्न पत्र – द्वितीय

AGRICULTURE

Agro-climatic zones of Rajasthan. Elements of crop production and effect on plant growth. Importance of weather forecasting, aerospace and remote sensing. Precision farming. Plant nutrients - functions and deficiency symptoms, soil reaction and bio-fertilizer, interaction, sources. Role of

organic manures, fertilizers and bio-fertilizers, integrated nutrient management. B.C. ratio of fertilizers consumption of fertilizers, soil productivity and management, water-management and weed management. Efficiency of different methods of irrigations. Problems of soil erosion in arid and semi-arid region. Agronomic practices in soil and water conservation. Agrostological measures to prevent soil erosion. Watershed, its use and factors affecting it, behaviour under dry land conditions, specific problems of watershed management, planning and operation of project under dryland condition, management of grassland and agro-forestation in water shed. Planning for small water shed management and soil conservation project. Organic farming - objectives and scope. Dry land farming - Role in economy, aridity and their characteristics, constraints in dry farming areas from crop production point of view, soil moisture, controlling transpiration process.

Role of farm forestry in soil and water conservation, silviculture, compatibility of crops, problems of seed germination etc. Appraisal of economics of farm forestry. Common herbicides and their uses in important grain crops, oils seeds, pulses and fibre crops, forage and grass land and consequences of their use. Agronomy of important crops - cereals, pulses, oilseeds, fibre crops, forage crops, sugarcane, sugarbeets, potato, cumin, Isabgol etc. Recommended varieties of important crops of Rajasthan.

Soil classification and soil survey, soils of Rajasthan, soil physics-physical properties, moisture, air temperature. Physical chemistry of soil-colloids, soil reactions. Soil microbiology-organic matter, Humus function, structure, formation, C/N ratio, symbiotic and non-symbiotic nitrogen fixation. Transformation and mineralization of phosphorus, potassium and nitrogen in soil, mixed and compound fertilizers, micronutrients and liquid fertilizer. Management of problematic soils, management of crops in problematic soils. Soil and water conservation. Attacking soil fertility problem.

Olericulture - Classification of vegetables, nursery, transplantation, seed testing and storage, cultivation practice of cauliflower, cabbage, chillies, brinjal, carrot, radish, onion, pea, okra, muskmelon, watermelon and sweet potato. Different styles of gardening-indoor out door etc. layout care and maintenance, cultivation of major cut flowers like Rose, Gladiolus, Tubrose and Chrysanthemum. Pomology - layout of orchards, propagation methods, cultivation of mango, citrus, banana, guava, pomegranate, grapes, papaya, ber, phalsa, aonla, datepalm, Post harvest losses and Principles of fruits and vegetable preservation, dehydration, bottling, canning.

Insect pests spectrum in Rajasthan. Assessment of crop losses and their implication in pest management. Management of insects & pests, insecticide application, hazards and safety precaution insecticide formulations and their dilutions. Detection of insect infestation in stored products and their management, Community campaign for white grub and other polyphagous pests management. Rat control. Management of ticks, mites and house hold pests. Integrated pest and disease management. Insecticidal pollution, residues and tolerance limit. Role and importance of fungi, nematodes, viroids, phytoplasma, bacteria, virus and other micro-organisms in agriculture. 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.

Essential plant nutrients and their role, major and micronutrients. Methods of Plant Breeding for self and cross pollinated crops, concept of heterosis, type of hybrids, Combining ability, DNA recombinant technology, transgenic crops and their scope, seed testing, type of seeds, seed certification standards for different crops.

Importance of livestock and poultry in Indian economy. Origin, distribution and main characteristics of INDIAN and EXOTIC Breeds of cow, buffalo, goat, sheep and poultry. Prevention & control of common infectious & contagious diseases of livestock and poultry. Feed stuff and their classification. Determination of nutritive value of feed, balanced ration. Preservation

of forages, common grasses, grass land and their management. Artificial insemination - merits, demerits, collection evaluation, dilution, preservation and storage of semen., Systems of inbreeding and out breeding, breeding value and its estimation. Heritability, repeatability, Systems of housing and layout of dairy farm buildings, maintenance of various farm records, preparation of schemes for dairy farming for small and marginal farmers and landless labourers. Common ailments of livestock, internal and external parasites and their treatment, Utilization of farm waste.

Limnology - water science, physico chemical and biological properties of water, late-ecosystem, water pollution and various types of water bodies. Fish morphology and anatomy, osmoregulation, respiration in fish. Different types of aquaculture systems and fisheries.

Peculiarities of Indian Agriculture, place of agriculture in Indian economy, five year plans, consumer behaviour, demand, supply, demand schedule and supply schedule, market equilibrium, elasticity, Principles of farm management. Agriculture marketing, marketing functions and institutions, WTO, contract farming, futures market. Prices of agricultural commodities. Agricultural finance and credit, credit institutions, Cooperative Banks, crop insurance. Agricultural Development and poverty alleviation programmes. Linear programming, agricultural production functions-characteristics and optimizations. Macro-economics.

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, media of communication Diffusion theory history of extension programme in India. CD, NATP, ATIC, HYVP, NAIP, MREGA, IRDP, PRA, PMRY, SGSY, JRY, ATMA, KVK, Panchgayati Raj, IVLP, T&V system, ADP, motivation, cooperative societies and voluntary organizations, Adult education and National Literacy Mission, sociological terms applied in rural society and community development. Aspects of Administration. Training of rural masses. Writing for effective dissemination of scientific information.

Data collection, summarization and presentation, Measures of central tendency, dispersion, correlation, linear regression, tests of significance-students 't', chi-square, general principles of CRD, RBD & LSD, Addition and Multiplication theorems of probability, Mathematical Expectation of a random variable and simple problems based on them, concept of sampling, simple random sampling (with and without replacement), factorial experiment, Karl Pearson's coefficient of correlation and Spearman's rank correlation.

Common workshop tools, survey instruments, bullock drawn implements, tools, scope of farm mechanization in India, tools and implements for field preparation, land leveling and sowing, measures of irrigation water, water lifting devices.

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