FURTHER DETAILS REGARDING MAIN TOPICS OF PROGRAMME No. 10/2018/ONLINE (Item No.3)

AGRONOMIST

KERALA STATE LANDUSE BOARD

(Category No.564/2017)

Part I - General Knowledge and Current Affairs

Salient Features of Indian Constitution

Salient features of the Constitution - Preamble- Its significance and its place in the interpretation of the Constitution.
Fundamental Rights - Directive Principles of State Policy - Relation between Fundamental Rights and Directive Principles - Fundamental Duties.
Executive - Legislature - Judiciary - Both at Union and State Level. - Other Constitutional Authorities.
Centre-State Relations - Legislative - Administrative and Financial.
Services under the Union and the States.
Emergency Provisions.
Amendment Provisions of the Constitution.

Social Welfare Legislations and Programmes

Social Service Legislations like Right to Information Act, Prevention of atrocities against
Women & Children, Food Security Act, Environmental Acts etc. and Social Welfare Programmes like Employment Guarantee Programme, Organ and Blood Donation etc.

RENAISSANCE IN KERALA

Towards A New Society

Introduction to English education - various missionary organisations and their functioning- founding of educational institutions, factories.printing press etc.

Efforts To Reform The Society

(A) Socio-Religious reform Movements

SNDP Yogam, Nair Service Society, Yogakshema Sabha, Sadhu Jana Paripalana Sangham, Vaala Samudaya Parishkarani Sabha, Samathwa Samajam, Islam Dharma Paripalana Sangham, Prathyaksha Raksha Daiva Sabha, Sahodara Prasthanam etc.

(B) Struggles and Social Revolts

Upper cloth revolts.Channar agitation, Vaikom Sathyagraha, Guruvayoor Sathyagraha, Paliyam Sathyagraha. Kuttamkulam Sathyagraha, Temple Entry Proclamation, Temple Entry Act .Malyalee Memorial, Ezhava Memorial etc.
Malabar riots, Civil Disobedience Movement, Abstention movement etc.

Role Of Press In Renaissance

Malayalee, Swadeshabhimani, Vivekodayam, Mithavadi, Swaraj, Malayala Manorama, Bhashaposhini, Mathnubhoomi, Kerala Kaumudi, Samadarsi, Kesari, AI-Ameen, Prabhatham, Yukthivadi, etc

Awakening Through Literature

Novel, Drama, Poetry, *Purogamana Sahithya Prasthanam, Nataka Prashtanam,* Library movement etc

Women And Social Change

Parvathi Nenmenimangalam, Arya Pallam, A V Kuttimalu Amma, Lalitha Prabhu.Akkamma Cheriyan, Anna Chandi, Lalithambika Antharjanam and others

Leaders Of Renaissance

Thycaud Ayya Vaikundar, Sree Narayana Guru, Ayyan Kali.Chattampi Swamikal, Brahmananda Sivayogi, Vagbhadananda, Poikayil Yohannan(Kumara Guru) Dr Palpu, Palakkunnath Abraham Malpan, Mampuram Thangal, Sahodaran Ayyappan, Pandit K P Karuppan, Pampadi John Joseph, Mannathu Padmanabhan, V T Bhattathirippad, Vakkom Abdul Khadar Maulavi, Makthi Thangal, Blessed Elias Kuriakose Chaavra, Barrister G P Pillai, TK Madhavan, Moorkoth Kumaran, C. Krishnan, K P Kesava Menon, Dr.Ayyathan Gopalan, C V Kunjuraman, Kuroor Neelakantan Namboothiripad,
Velukkutty Arayan, K P Vellon, P K Chathan Master, K Kelappan, P. Krishna Pillai, A K Gopalan, T R Krishnaswami Iyer, C Kesavan. Swami Ananda Theerthan , M C Joseph, Kuttippuzha Krishnapillai and others

Literary Figures

Kodungallur Kunhikkuttan Thampuran, KeralaVarma Valiyakoyi Thampuran, Kandathil Varghese Mappila. Kumaran Asan, Vallathol Narayana Menon, Ulloor S Parameswara Iyer, G Sankara Kurup, Changampuzha Krishna Pillai, Chandu Menon, Vaikom Muhammad Basheer. Kesav Dev, Thakazhi Sivasankara Pillai, Ponkunnam Varky, S K Pottakkad and others

GENERAL KNOWLEDGE AND CURRENT AFFAIRS

General Knowledge and Current Affairs

Part II :

Soil fertility and productivity - factors affecting; features of good soil management; problems of supply and availability of nutrients; relation between nutrient supply and crop growth; organic farming - basic concepts and definitions. Criteria of essentiality of nutrients; Essential plant nutrients – their functions, nutrient deficiency symptoms; transformation and dynamics of major plant nutrients.– Manures – fertilizers- Biological N fixation – Biofertilisers- Integrated Nutrient management- Pollution from Agricultural lands and global trends in waste management and waste utilization in agriculture. Recycling of agricultural waste.

Factors of soil formation; soil forming processes; weathering of rocks and mineral transformations; soil profile; Soil texture, textural classes, mechanical analysis, Soil consistence; dispersion and workability of soils; soil compaction and consolidation;

soil strength; swelling and shrinkage - basic concepts. Soil structure ; soil aggregation, aggregate stability; Soil survey and its types; Soil resource Inventory, soil survey techniques - conventional and modern; soil series – characterization and procedure for establishing soil series; benchmark soils and soil correlations-survey report & soil survey interpretations; soil mapping, thematic soil maps, cartography, mapping units, techniques for generation of soil maps. Problem soils and their management

Forms of soil erosion; effects of soil erosion and factors affecting soil erosion; types and mechanisms of water erosion; soil losses in relation to soil properties and precipitation. Universal soil loss equation, Principles of erosion control; erosion control measures – agronomical and engineering; erosion control structures. Soil conservation planning; land capability classification; soil conservation in special problem areas such as hilly, arid and semi-arid regions, waterlogged and wet lands.

Watershed management - concept, objectives and approach; Watershed planning, surveying and mapping of watersheds, water harvesting and recycling; flood control in watershed management; socioeconomic aspects of watershed management; case studies in respect to monitoring and evaluation of watersheds; use of remote sensing in assessment and planning of watersheds. Remote sensing platforms & satellites; Sensor systems –fundamentals of aerial photographs and image processing and interpretations. Crop stress and yield forecasting, prioritization in watershed and drought management, wasteland identification and management. Formulation of watershed development plans.

Water and its role in plants; Irrigation and irrigation management –definition objectives-limitations-water resources of India and Kerala- major irrigation projects of India and Kerala, Soil water movement in soil and plants; transpiration; soil-water-plant relationships; Free energy of water, soil moisture constants, soil water potential and its components, soil-plant-atmospheric continuum, Moisture-potential curve, crop plant adaptation to moisture stress condition. Water requirement of crops; Irrigation scheduling, micro irrigation system; Concepts of – ET, Cu, PET, ETc, Epan and their importance in assessing WR. Quality of irrigation water and management of saline water for irrigation, Irrigation efficiencies and methods of increasing water use efficiency. Agricultural drainage.

Tillage, tilth, objectives, tillage implements, types of tillage, special purpose tillage, frequency and depth of cultivation, compaction in soil tillage; Modern concept of tillage, zero tillage, minimum tillage, stubble mulch tillage, puddling, concept of conservation tillage; tillage in relation to weed control and moisture conservation; techniques and practices of soil moisture conservation (use of mulches, kinds, effectiveness and economics)

Definition, concept and characteristics of dry land farming; dry land versus rainfed farming; significance and dimensions of dry land farming in Indian agriculture. Extent of dry land area in India, agencies and programmes of dry land agriculture in India. Drought- definition, effect on plant growth, drought management. Principles of dry farming, crop management practices, agronomic practices for moisture conservation, shifting cultivation and alternate land use system. Contingent crop planning for different agro climatic zones of the state. Precision agriculture.

System approach- cropping system, definition and importance-physical resources and its management in cropping systems- Multiple cropping-intercropping, mixed cropping, sequential cropping, crop rotations, relay cropping, high density multispecies cropping, intercropping in relation to maintenance of soil productivity. Alley cropping-advantages- interactions in cropping systems- complimentary, competitive and neutral - role of non-monetary inputs and low cost technologies-input use efficiency in cropping systems. Homestead farming, mixed farming, Farming systems, integrated farming systems, Intensive integrated farming systems and sustainable agriculture and role of multipurpose trees and agroforestry.

NOTE: - It may be noted that apart from the topics detailed above, questions from other topics prescribed for the educational qualification of the post may also appear in the question paper. There is no undertaking that all the topics above may be covered in the question paper.