

**FURTHER DETAILS REGARDING MAIN TOPICS OF
PROGRAMME No. 10/2018/ONLINE (Item No.4)**

ASSISTANT MANAGER Gr.II

**STATE FARMING CORPORATION OF KERALA LIMITED
(Category No.192/16)**

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, Swadeshabhmani, 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 :

CROP PROTECTION

Integrated pest and disease management , Biocontrol agents (Trichoderma ,Pseudomonas etc) , Pheromones, Insect Growth Regulators, Synthetic Inhibitors, in Insect Pest Management, Fungicides, insecticides, acaricides, nematocides, and their formulations, Pest and diseases of plantation crops, Spices, Vegetables, Fruits and Flowers, Cereals, Pulses, Tuber Crops, Medicinal and Aromatic Plants and their Management; plant Quarantine and Phyto-sanitation, Insecticidal Act; Pesticide Residue Analysis, Transgenic Crop in Pest Management.

CROP PRODUCTION

Agronomic Classification of crops; crop yield contributing characters; vegetative propagation in field crops-methods of sowing/Planting; Tillage – types of tillage – tillage implements; Crop Production of Cereal (Rice), Tuber Crops, Forage Crops, Pulses and Oilseed. Water management of important crops of Kerala. Water resources and irrigation development in India and Kerala. Water conservation measures – water harvesting, agricultural drainage and its types. ; Watershed management -Watershed Development Programmes in India; dry farming and dry land farming – Soil – plant -water relationships. Soil erosion; Cropping pattern – Plant interactions – Cropping systems prevalent in Kerala – Homestead farming in Kerala , Agro forestry – Integrated farming system; Sustainable agriculture – crop residue management;ITK and farmer centered techniques and practices; Organic agriculture and its Components – Current status of organic farming – Initiatives in India and Kerala – National Programme for Organic Production(NPOP) – Accreditation agencies – Certification Agencies – National Standards for Organic Products (NSOP)-Soil health -Soil Health Card – Integrated Nutrient Management (INM)and Integrated Plant Nutrient Supply System(IPNS)

CROP IMPROVEMENT

Seed Production - Seed Quality – different classes of seed. Methods of breeding – hybridization – incompatibility and male sterility and their utilization in crop improvement; Heterosis; inbreeding depression; synthetics and composites; Population improvement programmes -recurrent selection; Clonal selection: Mutation breeding; Ploidy breeding; Wide hybridization and significance in crop improvement; Tissue culture technology and its applications – Types of in vitro culture-Somaclonal variation Types: Synthetic seed production; Genetic engineering;Transgenic plants and their applications. DNA finger printing; Marker Assisted Selection and its application in crop improvement; Biosafety rules and regulations:Rules related to GM crops-research,development ,field trials, and commercial cultivation;Plant breeders rights and farmers rights. UPOV, PPV and FR act. Intellectual Property Rights – WTO, WIPO,GATT,TRIPS. Protection of plant and animal genetic resources. biological materials, gene patenting, biotechnology related IPR issues – status.

PLANTATION CROPS,SPICES,MEDICINAL AND AROMATIC PLANTS

Plantation Crops – Coconut, Arecanut, Oilpalm, Rubber, Cashew, Tea, Coffee-Area, Production and Productivity, Origin, Distribution, Varieties, Propagation-Seed-Seed selection, Mother Plant selection, Seedling Selection and vegetative-budding, grafting, layering. Production technology, Stage of harvest, Yield; Spices-Black Pepper, Cardamom, Ginger, Turmeric, Nutmeg, Clove, Cinnamon, All spice, Seed and herbal spices – Area, Production and Productivity, Origin, Distribution, Varieties, Propagation, Production technology, Stage of harvest, Yield; Medicinal Plants-Dioscorea, Opium, Isabgol, Gulgulu,Tinospora, Aswagandha and Commercial and Indigenous medicinal plants of Kerala-Active Principle, uses, varieties, production technology, Harvest and Yield; Aromatic grasses: Vetiver, lemon grass, Citronella, Palmrosa, Aromatic herbs: Ocimum, Pachouli, Mint, Aromatic trees:Sandalwood,Eucalyptus-Principles,Varieties, Production technology, Harvest,Yield .

OLERICULTURE , POMOLOGY AND FLORICULTURE

Vegetables – Cucurbitaceous, Solanaceous, leguminous, leafy and cool season vegetables – Area, Production, Productivity, Origin, Distribution, Nutritional value, Production technology, Harvest, yield, Nutrient deficiencies, application of growth regulators; Fruits – Banana, Mango, Pineapple, Papaya, Sapota, Guava, Grapes, Citrus, Mangosteen, Pomegranate, Moraceous and Annonaceous Fruits-Area, Production, Productivity, Propagation – sexual and asexual-rootstock and scion selection, Crop management, nutrient deficiencies, physiological disorders and their correction; Use of growth regulators, Major problems associated with fruit crops; Application of growth regulators; Floriculture-Types of gardens, Types of lawn, Production technology and varieties of rose, anthurium, chrysanthemum, gladiolus, tuberose, jasmine, heliconia, cacti: Ideal flower characters of cut flowers, Indoor gardening, Bonsai, Terrariums, Rock garden, Vertical Gardening.

POSTHARVEST TECHNOLOGY AND VALUE ADDITION

Postharvest Technology of Plantation crops, spices, essential oil yielding crops, cut flowers, -physiology of ripening, maturity and senescence of fruits and vegetables – preparation of important fruits and vegetable products-Jam, Jellies, Pickles, Candies, fermented and unfermented beverages; production of essential oils and oleoresins; Postharvest management techniques- precooling, grading and sorting; Principles and methods of preservation, drying, dehydration, thermal processing chemical methods; Marketing systems and export promotion agencies.

Classification of forests and forestry, branches of forestry and their relationships. Silviculture – definitions, objectives and scope. Benefits of forests on environment. Trees and their distinguishing features, growth and development. High forest and coppice forests. Regeneration of forests – objectives – ecology of regeneration – natural, artificial and assisted regeneration. Field planting – Tending operations -weeding, cleaning, singling, pruning, pollarding, lopping and thinning – cultural operations. Site quality and site index – Forest types of India and Kerala and their distribution. Silvicultural systems – classification and choice of silvicultural systems – Silviculture of Indian trees – Origin distribution – General description, phenology, Silvicultural characters, regeneration methods, silviculture systems, use and economic importance of major timber trees of Kerala. Agroforestry – Clasification of agroforestry systems -structural, functional ecological and socio – economic . Multipurpose tree species and their characteristics. Choice of species for agroforestry Role of agroforestry in soil and water conservation, global climate change – mitigation and adaptation strategies – Seed production areas – Seed orchards – methods of seed collection, seed processing, seed storage, seed dormancy, pretreatment and testing of forest trees. Forest nursery establishment – bare root and containerised nursery techniques. Study of important nursery pests and diseases Development of plantation forestry – Plantation characteristics – species composition – plantation organization and structure – social and economic factors in plantation development. Plantation planning – Plantation establishment – Planting stock – Planting pattern and

spacing – Plantation maintenance Nutrition in Plantation – Plantation records
-industrial plantation – MFP plantation – Clonal plantation.

Forest mensuration – Methods of diameter and girth measurements – Volume measurement of standing trees, logs, branch and wood – formulae involved – Volume table – Determination of growth of the trees – Increment – CAI and MAI – increment percent. Forest management, sustainable forest management criteria and indicators. Increasing and progressive yields. Rotation Normal forest – definition, basic factors of normality. Forest inventory and yield prediction. Working plan – Joint forest management National forest policies – scope and importance – Indian forest Act 1927 general provision. Forest Conservation Act 1980. Brief description about other major forest laws of regional, national and international significance. Collection, management and importance of Non-timber forest products of Kerala. Importance of forest pathology, land marks, issued due to forest tree diseases, root diseases(wilt, root rot) stem diseases, heart rots, stem blisters, rusts, cankers, pink diseases, gummosis and foliar diseases(rust,powdery mildew, leaf spot, needle blight etc)of major timber species.

Tree improvement and its relation to the disciplines of forestry – Genetic basis of tree breeding – Natural variability in trees – Provenance testing – seed orchards – Progeny trial and improvement of seeds orchards – Vegetative propagation and clonal forestry. Conservation of forest tree germplasm. Recent techniques in tree improvement. Wood anatomy, meristem – secondary growth in woody plants -. The microscopic and macroscopic features of wood. Anatomical features of common Indian timbers – Manipulation of structural features through breeding – silviculture and environmental manipulations. Reaction wood, tension wood and compression wood, Electrical, thermal and acoustic properties of wood. Mechanical properties of wood, wood seasoning. Wood preservation – composite wood – pulp and paper making Logging and ergonomics.

Biodiversity , origin of biodiversity – the ecological role of biodiversity – diversity and niche structure – human and species diversity – biodiversity hot spots . Endemism – rarity and extinction of species – causes of extinction. Biodiversity conservation – population variability – genetic drift – diversifying selection pressure in situ conservation national parks, sanctuaries. Biosphere concept. Biosphere reserves – reserve and protected forests. Ex situ conservation – role of botanical gardens in conservation. Conservation efforts in India and world wide. Wildlife management- direct and indirect methods of population estimation of wildlife.

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.