

**FURTHER DETAILS REGARDING MAIN TOPICS OF
PROGRAMME No. 04/2018 (Item No.14)**

**RESEARCH ASSISTANT
STATE PLANNING BOARD
(Category No.434/2016)**

PART I

General Knowledge, Current Affairs & Renaissance in Kerala

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 Thampuram, KeralaVarma Valiyakoyi Thampuram, 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

ECONOMICS

- 1) **National income and balance of payment**:- Concepts and measurement of national income – changing contribution of various sectors in national income-structure of balance of payment accounts – exchange rate determination – performance of foreign trade of India
- 2) **Poverty, inequality and unemployment** :- Role of planning in India's development – concepts, measurement and magnitude of poverty – inequality in income distribution – regional disparity in

income – definition and measurement of unemployment – NSSO reports on consumption and unemployment – employment creation and poverty eradication programmes of Centre and State of Kerala.

- 3) **Financial System**:- Organised and unorganized financial market – money and capital market – various instruments and institutions in money and capital markets in India – instruments and performance of monetary and credit policy – role of RBI – financial sector reforms since 1991 – concepts and measurement of money supply – digital money – effects of demonetization.
- 4) **Public Economics**:-Concepts of social and merit goods – Growth and structure of public expenditure of Centre and States – cannons of taxation – tax structure in India – Direct and Indirect Tax reforms in India – Goods and Service Tax(GST) – Concepts and methods of measuring inflation in India .
- 5) **Budgetary Control**:- Concepts and structure of government Budget – innovation in budget such as performance Based, Zero based Budgeting and Planning, Programming and Budgetary System(PPBS),Growth of revenue, fiscal and primary budget of centre and state governments – Budgetary Process and Control in India – Fiscal Responsibility Budgetary Management(FRBM)policy in India.
- 6) **Fiscal Federalism and role of Government in economic development**:- Concept of Federal Finance – Principles of Federal Finance – Fiscal Imbalance – Vertical and Horizontal Imbalance – Methods of Inter Governmental Resource Transfer – Fiscal Federalism in India – Centre–State Financial Relations in India – Finance Commission in India – Recommendations of the 14th Finance Commission – State Finance Commission in Kerala

PART III

STATISTICS

UNIT I:- DESCRIPTIVE STATISTICS AND PROBABILITY:-

Measures of Central Tendency, Measures of Dispersion, Skewness, Kurtosis, Probability – Definitions, Limit of Sequence of events, monotone and continuity properties of probability measure, conditional

probability, Bayes' Theorem, Borel – Cantelli lemma, Borel Zero-one law, Kolmogorov zero -one law. Random variables, probability distribution and distribution function -its properties, Moment generating function and characteristic function.

UNIT II:- DISTRIBUTION THEORY:- Standard distributions:- Uniform , Binomial, Poisson, Geometric, Hypergeometric , Normal, Exponential, Pareto, Gamma and Beta distributions and their characterizations , sampling distributions - chi square, F distributions and their properties and applications, Law of large numbers, Central limit theorem.

UNIT III:- SAMPLING AND DESIGN OF EXPERIMENTS:- Probability and non-probability sampling, Sampling design, Probability sampling methods – Simple random sampling, Systematic sampling, Stratified sampling, Cluster sampling , Multi – stage sampling, PPS sampling, Non-Probability sampling methods; Principles of Design of Experiments, Completely Randomized design, Randomized Block Design, Latin square design, Incomplete block design, BIBD, PBIBD, Factorial experiments 2^2 , 2^3 , 3^2 and 3^3 .

UNIT IV:- STATISTICAL INFERENCE:- Point estimation – properties of estimators, BLUE UMVU estimators, Interval estimation , methods of estimation – MLE, Method of moments, Minimum chi square , Testing of hypothesis – Types of hypothesis, significance level, power of a test, Most powerful Test, UMP test, Parametric tests(tests of mean, variance, proportion)and Non-Parametric tests, Analysis of variance

UNIT V:- REGRESSION ANALYSIS AND TIME SERIES :- Simple linear regression, Simple Correlation, Multiple Correlation, Ordinary Least Square estimation of regression parameters, Inference on regression coefficients, Multiple regression models, Estimation , Properties, Assumptions, Solutions to the violation of assumptions. Time series – additive and multiplicative models, determination of trends, Growth curves, Analysis of Seasonal fluctuations, Construction of seasonal indices.

PART -IV

COMMERCE

- 1) **Basics of Accounting** :- Fundamentals of accounting – accounting assumptions and Principles. Journal – subsidiary books – Ledger – Preparation of accounts – Trial Balance – Trading, Profit and Loss account and balance sheet

- II) **Management Information Systems**:- Meaning of MIS – Need for a database – utilization of models – characteristics of MIS – Sub Systems of MIS – Executive information systems – Information resource Management – Role of MIS - Data Information – features of information – Types of information – quality of information – value of information.

- III **Banking** :- Banking Regulation Act 1949 – Basic Terms, Reserve) Bank of India , Role – Scheduled Bank – Credit information – Non -banking Financial Institutions (NBFC)RTGS(Real Time Gross Settlement)-Types of electronic payment system- credit cards – Debit cards – Smart cards – Internet Banking and Mobile banking.

- IV **Marketing Management** :- Introduction to Marketing –Marketing) Management – Product Mix – Market environment – Market Segmentation – Targeting and positioning – Products, Brands - Marketing Channels – Retailing and Wholesaling, Advertising and Sales Promotion. Consumer behavior :importance and nature of consumer behavior – Types of consumers and their role – Role of consumer behavior in marketing .

- V) **Financial Management** :-Introduction – meaning – importance – Nature –scope – components – objectives – principles – functions – liquidity Vs Profitability

PART- V

MATHEMATICS

Differential Equations:- Orthogonal trajectories, exact equations, Non-Linear differential equations of first order, second order differential equations with constant or variable coefficient and its solutions,

Simultaneous differential equations and its applications. Linear differential equations of first order.

Linear Algebra :- System of linear equations; Elementary matrices, process of Gaussian elimination, Row-reduced echelon matrices, Rank of a matrix. Determinants-Eigen values and eigen vectors, characteristic equations. Vector space-Examples and properties, subspaces, linear independence of vectors, finite vector spaces, basis, dimensions, linear transformations, representation of linear transformations as matrices.

Abstract Algebra:- Groups, subgroups, normal subgroups, cyclic groups, permutation groups, group homomorphism, isomorphism, isomorphism theorems, Sylow theorems and applications. Rings and fields, examples.

Real Analysis :- Algebraic and completeness properties of real numbers, intervals, cluster points, open and closed set, sequence and their limits, monotone sequences, subsequences, divergent sequences, Limit of functions, continuous functions, combination of continuous functions, sequence of functions, uniform convergence and point wise convergence, properties of Riemann integral, integral as a limit, convergence of infinite series, test of convergence, series of functions, derivatives.

Complex Analysis:- Analytic and harmonic functions, Cauchy Riemann equations, analytic function as mappings, Mobius transforms, power series representations of analytic functions, zero of analytic functions, singularities, residue theorem and applications in the evaluation of integrals.

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.