Tamil Nadu Public Service Commission

Post of Research Assistant in Evaluation and Applied Research Department

(Post Graduate Degree Standard Covering All the Subjects Referred in the Rules)

Unit - I:


Unit - II:


Unit – III:

Econometrics - definition, methodology, Data – meaning and types of data such as cross-section, time-series and panel data, primary & secondary data- advantages & disadvantages, Variables – meaning and types such as quantitative and qualitative variables, measurement scales of variables such as ratio, interval, ordinal and nominal-

**Unit - IV:**


**Unit - V:**


**Unit - VI:**


UNIT - VII:

UNIT - VIII:

Unit - IX:

**Unit - X:**

**Unit – XI:**

**Unit – XII:**

Unit – XIII:

Unit – XIV:

UNIT - XV:

UNIT - XVI:

Unit – XVII:
Algebra and Differential Equations - Groups: Groups – Sub groups – Normal subgroups and quotient subgroups – Homomorphisms – Automorphisms – Cayley’s Theorem – Rings: Rings - Special class sub rings - Homomorphisms – Ideals and Quotient Rings – Vector Spaces: Basic Concepts – Linear Independent and Bases – Inner Product
Spaces – ODE: ODE with constant coefficients – ODE with variable coefficients –
Higher order ODEs – PDE: First order PDE - Second order PDE – Elliptic, parabolic,
and hyperbolic PDEs.

Unit – XVIII :
Analysis - Real Analysis: Properties of monotonic functions - Functions of bounded
variations – Total variations – Additive property of total variation – Total variation on
\([a,x]\) as a function of \(x\) - Continuous functions of bounded variations – Infinite Series:
Absolute and conditional convergence – Dirichlet’s test and Abel’s test Rearrangement
of series – Riemann’s theorem on conditionally convergent series.– Complex Analysis:
Differentiability and Cauchy-Riemann Equations – Harmonic Functions – Power Series
as an Analytic Function – Complex Integrations – Cauchy Integral Formula – Morera’s
Theorem – Existence of Harmonic Conjugate – Taylor’s Theorem – Conformal
mappings – Functional Analysis: Metric Spaces – Convergence, completeness and
Baire’s Theorem - Continuous mappings - Space of continuous functions - Euclidean
and Unitary spaces - Topological Spaces: Basis for a Topology – The Product Topology
– The Metric Topology – Connected Spaces – Connected Subspaces of the Real Line
– Components and Local Connectedness. Decision Making: Basic Statistics: Moments
– Mean – Variance – Standard deviations – Linear regression – Rank correlations –
Attributes – Index Numbers. Linear Programming Problem: Graphical Methods –
Travelling Salesman Problem – Assignment Problem – Simplex Methods.

Unit - XIX:
Anthropology, meaning scope and relationship with other disciplines particularly social
sciences, humanities etc. Main branches, their scope, The nature of culture, The nature
of society: concept of society, society and culture, social institutions, social stratification
Marriage: Definition and universality, Family, Kinship, Economic organization: meaning,
scope, and relevance of economic anthropology, Religion Research methods in
Anthropology - Field work tradition in Anthropology - Distinction between techniques,
methods, methodology - Tools of data collection, observation, interview, schedules,
case study, genealogy etc.

Unit - XX:
Evolution of the Indian culture and civilization: Palaeolithic, Neolithic, Harrappan
cultures; Tribal cultures of India, Brief ethnographic details of Tribes of Tamil Nadu.
Caste system in India: Structure and characteristics, theories of origin of caste,
Dominant caste. Indian village: Indian village as a social system, peasant cultures.
Cultural change in Indian Society: Sanskritization, Westernization, Modernization, Post
– Modernism, Globalization ; Problems of the tribal communities a) poverty b) low
literacy c) health Development of forest policy and Tribals Constitutional safe guards for
ST/SC, Role of Anthropology in Tribal and Rural development. Demographic profile of
India – Ethnic and Linguistic elements in the Indian population and their distribution.
Gender issues in Tamil Nadu.