TSPSC Statistical Officer Syllabus

TSPSC Statistical Officer Statistics Syllabus:

Introduction to Statistics:

- Census – Schedule and questionnaire
- Meaning
- Primary and Secondary data
- Importance and limitations of statistics
- Collection of data
- Tabulation
- Sampling (Random, Non-Random)
- Diagrammatic and graphic presentation of data
- Frequency distribution

Measures of Central Tendency, Dispersion, Skewness and Kurtosis:

- Types of Averages: Arithmetic Mean, Geometric Mean, Harmonic Mean, Median, Mode, Deciles, Percentiles
- Properties of averages and their applications
- Objectives and characteristics of measures of central tendency
- Skewness: Meaning – Karl Pearson's and Bowley's Measures of Skewness and Kurtosis
- Dispersion: Meaning and properties – Types: Range, Quartile Deviation, Mean Deviation, Standard Deviation, Coefficient of Variation.

Probability:

- Sample space
- Random experiment
- Probability on a discrete
- Algebra of events
- Basic theorems of probability and simple examples based on theorems

Concept of Random variable:

- Discrete and Continuous, Bernoulli, Binominal and Poisson distributions.
- Normal distribution and its applications and uses.
- The concept of the Unbiased estimator, consistency
- Efficiency and sufficiency, large and small sample test

Correlation and Regression:

- Regression analysis: Meaning and utility – Comparison between Correlation and
- Regression – Regression Equations – Interpretation of Regression Coefficient.
- Correlation: Meaning and uses – Types of correlation – Karl Pearson's correlation
- coefficient – Spearman's Rank correlation – Probable error.

Analysis of Time Series and Index Numbers:

- Time Series Analysis: Meaning and utility
- Components of time series – Measurement of trend and seasonal variations
- Utility of decomposition of time series – Decentralization of data.
- Index Numbers: Meaning and importance – Methods of construction of index numbers:
- Price Index Numbers, Quantity Index Numbers – Tests of Adequacy of Index Numbers
- Deflating Index Numbers – Cost of living Index Numbers – Limitation of Index Numbers

Sampling Techniques:

- Estimation of Sample size and Simple
- Stratified and Systematic Random Sampling.

English:

- Prepositions
- Spelling Test
- Synonyms
- Sentence Arrangement
- Sentence Completion
- Fill in the blanks
- Spotting Errors
- Error Correction (Underlined Part)
- Passage Completion
- Active and Passive Voice
- Antonyms
- Idioms and Phrases
- Error Correction (Phrase in Bold)
- Joining Sentences
- Sentence Improvement
- Transformation
- Substitution
- Para Completion

Reasoning:

- Verbal Reasoning
- Analytical Reasoning
- Analogies
- Verbal and Figure Classification
- Relationship Concepts
- Decision Making
- Non-Verbal Reasoning
- Logical Reasoning
- Judgment
- Problem-Solving

- Visual memory
- Puzzles
- Similarities
- Arithmetical Number Series
- Differences
- Observation
- Data Interpretation
- Data Sufficiency

Basic Computers:

- Binary system
- Algorithms and Flowcharts, MS-Office
- A memory of a computer, Arithmetic and Logical operations on numbers.
- Octal and Hexadecimal systems.
- Codes, Bits, Bytes and Words.
- Precision.
- Conversion to and from Decimal systems.
- AND, OR, XOR, NOT and Shit/Rotate operators.

General Knowledge:

- History of Modern India with a focus on Indian National Movement
- Current Affairs – Regional, National and International
- Geography of India with a focus on Telangana
- International Relations and Events.
- Environmental issues and Disaster Management
- General Science; India's achievements in Science and Technology
- Society, Culture, Heritage, Arts and Literature of Telangana
- Economy of India and Telangana
- Indian Constitution and Polity with a focus on local self-Government
- Policies of Telangana State
- History of Telangana with special emphasis on Movement for Telangana Statehood