



Nepal Rastra Bank Syllabus for Statistician (Officer, Contract)

Stages of Examination

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| 1. First Stage: Written Examination | Full Marks: 100 | Pass Marks: 40 |
| 2. Second Stage: Interview | Full Marks: 20 | |

Remarks:

1. In written examination, questions shall be asked in English.
2. Objective questions will be asked.
3. 20% marks will be deducted for each incorrect answer.
4. The candidates selected from the written examination will be called for the second stage examination.
5. This syllabus will be applicable from March 27, 2023.

First Stage: Written Examination Full Marks: 100 Time: 1 hours

Examination System	Section	Number of Question and Marks	Marks
Multiple Choice Questions	1	5 questions × 2	10
	2.1	5 questions × 2	10
	2.2	5 questions × 2	10
	2.3	5 questions × 2	10
	2.4	5 questions × 2	10
	2.5	5 questions × 2	10
	2.6	5 questions × 2	10
	2.7	5 questions × 2	10
	2.8	5 questions × 2	10
	2.9	5 questions × 2	10
Total	50 questions × 2 Mark		100

1. General Awareness and Contemporary Issues

- 1.1 Geographical, socio-cultural, economic and demography of Nepal
- 1.2 The Constitution of Nepal
- 1.3 Governance system and Government (Federal, Provincial and Local)
- 1.4 Government planning, budgeting and accounting system
- 1.5 Banking and financial sector of Nepal
- 1.6 Nepal Rastra Bank : history, objectives, organizational structure and functions
- 1.7 Current Macroeconomic situation of Nepal
- 1.8 Major events and current affairs of national and international importance

2. Technical Subject

2.1 Probability and distribution:

- 2.1.1 Sets and Fields;
- 2.1.2 Probability Space and Functions - Probability Space; Conditional Probability; Distribution Function; Expectation; Characteristic Function
- 2.1.3 Probability Distributions - Multinomial Distribution; Extreme Value Distributions; Distribution of Order Statistics; Generalized Power Series Distribution; Prior and Posterior Distributions; Compound Negative Exponential Distribution; Mixed Type Distribution:

2.2 Mathematics for Statistics

- 2.2.1 Numerical Analysis - Algebraic and Transcendental Equations; Interpolation and Extrapolation; Ordinary Differential Equations
- 2.2.2 Real Analysis - Sequences and Series; Power series; Fourier series; Integration; Function of several variables

2.3 Descriptive statistics

- 2.3.1 Measures of central tendency
- 2.3.2 Measures of dispersion
- 2.3.3 Measures of kurtosis
- 2.3.4 Measures of skewness
- 2.3.5 Measures of positional statistics: quartile, quintile, & decile
- 2.3.6 Outliers and their consequences

2.4 Correlation and Regression

- 2.4.1 Simple, partial and rank correlation
- 2.4.2 Multiple correlation and coefficient of determination
- 2.4.3 Simple and multiple regression
- 2.4.4 Measures and tests of goodness of fit in regression
- 2.4.5 Tests for normality in regression
- 2.4.6 Logit models

2.5 Statistical Inference

- 2.5.1 Estimation
- 2.5.2 Interval Estimation
- 2.5.3 Testing of Hypothesis
- 2.5.4 Sequential Tests

2.6 Sampling

- 2.6.1 Simple random sampling
- 2.6.2 Stratified random sampling
- 2.6.3 Systematic sampling

- 2.6.4 Cluster sampling
- 2.6.5 Multiphase Sampling
- 2.6.6 Sub-Sampling
- 2.6.7 Standard errors
- 2.6.8 Sampling distribution
- 2.6.9 Distribution of sample mean

2.7 Econometrics

- 2.7.1 Multiple Linear Regression (Matrix Approach)
- 2.7.2 Violation of Assumptions
- 2.7.3 Binary Logistic Regression
- 2.7.4 Time Series Analysis : Components of Time series; Trends and seasonal & cyclical variations; Autocorrelation and its test; Forecasting

2.8 Research Methodology

- 2.8.1 Research Methodology: Scientific Approach of Research; Research Design; Types of Researches; Qualitative and Quantitative Researches; Methods of Data Collection
- 2.8.2 Measurements and Scales - Concept of measurement and scale; Reliability and Validity; Social scales
- 2.8.3 Sample Designs, Plans and Data Analysis : Sample Designs and Plans; Concepts and Techniques of Data Analysis - Causal analysis, Cause and effects analysis, Canonical analysis, Factor analysis, Survival analysis, Data analysis by using multiple regression analysis, Multicollinearity and correlation matrix, Binary logistic regression, Non-linear regression, Two-stage least squares, Multinomial logistic regression, Probit and logit analysis

2.9 Miscellaneous

- 2.9.1 Statistical System of Nepal : National statistical system; Major statistical agencies; Statistical functions of Nepal Rastra Bank; Existing Statistical act and regulation
- 2.9.2 Price and indexes: Wholesale price, retail price, producers price; Consumers Price Index (CPI); Agricultural Production Index; Manufacturing Production Index; Manufacturing Producers Price Index
- 2.9.3 Human development and poverty statistics : Latest HD status and poverty situation of Nepal; Sustainable Development Goals; Major sources of poverty statistics; Poverty measuring practices in Nepal; Nepal Living Standard Survey