

**राष्ट्रिय चिया तथा कफी विकास बोर्ड**  
पदपूर्ति उपसमिति

तथ्याङ्क अधिकृत पद, अधिकृतस्तर तृतीय श्रेणीको खुला र आन्तरिक प्रतियोगितात्मक परीक्षाको

**पाठ्यक्रम**

पाठ्यक्रमको रूपरेखा : यस पाठ्यक्रमको आधारमा निम्नानुसार दुई चरणमा परीक्षा लिइने छ :  
 प्रथम चरण :- लिखित परीक्षा पूर्णाङ्क :- २००  
 द्वितीय चरण :- अन्तर्वार्ता पूर्णाङ्क:- ३०

प्रथम चरण - लिखित परीक्षा योजना (Examination Scheme)

पत्र	परीक्षा प्रणाली	पूर्णाङ्क	उत्तीर्णाङ्क	प्रश्न संख्या X अङ्कभार	समय
प्रथम	वस्तुगत बहुउत्तर (Multiple choice)	१००	४०	५० X २=१००	४५ मिनेट
द्वितीय	विषयगत (Subjective)	१००	४०	१० X १०=१००	३ घण्टा

द्वितीय चरण

विषय	पूर्णाङ्क	परीक्षा प्रणाली
व्यक्तिगत अन्तर्वार्ता	३०	मौखिक

- लिखित परीक्षाको माध्यम भाषा नेपाली वा अङ्ग्रेजी अथवा नेपाली र अङ्ग्रेजी दुवै हुन सक्ने छ ।
- प्रथम र द्वितीय पत्रको लिखित परीक्षाको प्रश्न पत्र छुट्टाछुट्टै हुने छ ।
- प्रथम पत्रमा वस्तुगत बहुउत्तर (Multiple choice) प्रश्नहरूको उत्तर सही दिएमा प्रत्येक सही उत्तर वापत १ (एक) अङ्क प्रदान गरिनेछ भने गलत उत्तर भएमा सम्बन्धित प्रश्नको अङ्कभारको २० प्रतिशत कटौत हुने छ ।
- द्वितीय पत्रको विषयगत प्रश्नका लागि तोकिएका १० अङ्कको एउटा लामो प्रश्न वा एउटै प्रश्नका दुई वा दुई भन्दा बढी भाग (Two or more parts of a single question) वा एउटा प्रश्न अन्तर्गत दुई वा बढी टिप्पणीहरू (Short notes) सोध्न सकिने छ ।
- पाठ्यक्रममा समावेश भएका सबै पाठ्यांशहरूबाट यथासंभव प्रश्न सोधिने छ ।
- यस पाठ्यक्रममा जे सुकै लेखिएको भए तापनि पाठ्यक्रममा परेका ऐन, नियमहरू परीक्षाको मिति भन्दा ३ (तीन) महिना अगाडि (संशोधन भएका वा संशोधन भई हटाइएका वा थप गरी संशोधन भई) कायम रहेकालाई यस पाठ्यक्रममा रहेको सम्झनु पर्दछ ।
- प्रथम चरणको लिखित परीक्षाबाट छनौट भएका उम्मेदवारहरूलाई मात्र द्वितीय चरणको अन्तर्वार्तामा सम्मिलित गराइनेछ ।
- पाठ्यक्रम लागु मिति: २०७२।६।८

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**पाठ्यक्रम**

**प्रथम पत्र**

**तथ्याङ्क शास्त्र**

- 1) Probability and Distribution (5%)
  1. Basic properties of probability
  2. Addition rule of probability
  3. Independent and mutually exclusive events
  4. Conditional probability
  5. Multiplication rule of probability
- 2) Random Variables (15%)
  1. Notion of random variable
  2. Probability distribution
  3. Binomial, Poisson and Normal distribution
  4. Mathematical expectation
  5. Distribution of independent random variables
  6. Notion of likelihood function
- 3) Mathematics for Statistics (15%)
  1. Rates, Ratios and Proportion
  2. Number system
  3. Logarithm
  4. Permutation and combination
  5. Principle of least square
  6. Rank of a matrix
  7. Inverse of a matrix
  8. Quadratic forms
  9. Eigen values
- 4) Descriptive statistics (15%)
  1. Measures of central tendency
  2. Measures of dispersion
  3. Measures of kurtosis
  4. Measures of skewness
  5. Measures of positional statistics: quartile, quintile, & decile
  6. Outliers and their consequences
- 5) Correlation and Regression (10%)
  1. Simple, partial and rank correlation
  2. Multiple correlation and coefficient of determination
  3. Simple and multiple regression
  4. Measures and tests of goodness of fit in regression
  5. Tests for normality in regression
  6. Logit models
- 6) Estimation (5%)
  1. Properties of a good estimator
  2. Methods of estimation
  3. Properties of maximum likelihood estimator

4. Best linear unbiased estimator
5. Interval estimation
- 7) Hypothesis testing (5%)
  1. Simple and composite hypothesis
  2. Type I and type II error
  3. Unbiased test
  4. Likelihood ratio test
  5. z, t, chi-square and F tests
  6. p value
- 8) Sampling methods and Distributions (5%)
  1. Simple random sampling
  2. Stratified random sampling
  3. Systematic sampling
  4. Standard errors
  5. Sampling distribution
  6. Distribution of sample mean
  7. Student's t and chi-square distribution
- 9) Time-series Analysis (2%)
  1. Trends, and seasonal & cyclical variations
  2. Autocorrelation and its test
  3. Forecasting
- 10) Economics (3%)
  1. Endogenous and exogenous variables
  2. Absolute and relative change
  3. Concept of marginal and elasticity
  4. Consumption function, saving, capital formation and capital output ratio
  5. Cobb-Douglas production function
  6. Gini Coefficients
- 11) Data collection and processing activities (5%)
  1. Data gathering process
  2. Questionnaire design
  3. Methods and techniques of data summarization/analysis
  4. Errors in surveys and censuses: Control and measurement of errors
  5. Quality evaluation of data
- 12) National accounts statistics of Nepal (2%)
  1. System of National Accounts (SNA) – Importance and uses
  2. Macroeconomic aggregates – Nominal and Real GDP, GNI, Consumption, Saving,
- 13) Population statistics of Nepal (3%)
  1. Major sources of population data
  2. Population censuses of Nepal
  3. Composition and distribution of population
  4. Fertility, Mortality, Migration
  5. Population growth and population projection
- 14) Price and indexes (5%)
  1. Wholesale price, retail price, producers price
  2. Consumers Price index (CPI)
  3. Agricultural Production Index
  4. Manufacturing Production Index
  5. Manufacturing Producers Price Index

15) Human development and poverty Statistics

(5%)

1. Latest HD status and poverty situation of Nepal
2. Millennium Development Goals
3. Major sources of poverty statistics
4. Poverty measuring practices in Nepal
5. Nepal Living Standard Survey (NLSS)

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पाठ्यक्रम

द्वितीय पत्र  
तथ्याङ्क शास्त्र सम्बन्धी विषय

**Section A – 20 Marks**

- 1) Data collection and processing activities
  1. Data gathering process
  2. Questionnaire design
  3. Methods and techniques of data summarization/analysis
  4. Errors in surveys and censuses: Control and measurement of errors
  5. Quality evaluation of data
- 2) Sampling methods and Distributions
  1. Simple random sampling
  2. Stratified random sampling
  3. Systematic sampling
  4. Cluster sampling
  5. Standard errors
  6. Sampling distribution
  7. Distribution of sample mean
  8. Student's t and chi-square distribution
- 3) Time-series Analysis
  1. Components of time series
  2. Autocorrelation and its test
  3. Forecasting

**Section B – 30 Marks**

- 4) Economics
  1. Endogenous and exogenous variables
  2. Absolute and relative change
  3. Concept of marginal and elasticity
  4. Consumption function, saving, capital formation, capital output ratio
- 5) National accounts statistics of Nepal
  1. System of National Accounts (SNA) – Importance and uses
  2. Macro economic aggregates – Nominal and Real GDP, GNI, Consumption, Saving
- 6) Price and indexes
  1. Wholesale price, retail price, producers price
  2. Consumers Price index (CPI)
  3. Agricultural Production Index
  4. Manufacturing Production Index
  5. Manufacturing Producers Price Index
- 7) Public finance, money and banking statistics
  1. Major sources of data
  2. Revenue statistics
  3. Money and banking statistics
  4. BOP

### **Section C – 30 Marks**

- 8) Agriculture, fishery and forestry statistics of Nepal
  1. Major sources of agricultural statistics
  2. Agricultural censuses
  3. Current agricultural statistics – importance and problems
  4. Food balance sheet
  5. Forestry statistics
  6. Objectives, targets and strategies of Agriculture Perspective Plan (APP)
- 9) Industry, trade and service statistics of Nepal
  1. Major sources of data
  2. Censuses and surveys of manufacturing establishments
  3. Internal and international trade statistics
  4. Energy statistics
  5. Irrigation and water statistics
  6. Other establishment surveys
- 10) Statistical system of Nepal
  1. National statistical system
  2. Major statistical agencies
    - a) Central Bureau of Statistics and its role as a central statistical agency
    - b) Ministries and other government agencies related to statistical activities
  3. Statistical functions of Nepal Rastra Bank
  4. Statistical functions of universities and Non-governmental organizations
  5. Statistical act, 2015 (B.S.) and statistical regulations, 2041 (B.S.)
- 11) Miscellaneous
  1. Environment statistics
  2. Tourism statistics
  3. Gender statistics
  4. Data services
  5. Databank
  6. Electronic dissemination
  7. Introductory GIS
  8. Spatial data, digital data

### **Section D – 20 Marks**

- 12) Human development and poverty Statistics
  1. Latest HD status and poverty situation of Nepal
  2. Millennium Development Goals
  3. Major sources of poverty statistics
  4. Poverty measuring practices in Nepal
  5. Nepal Living Standard Survey (NLSS)
- 13) Social Statistics
  1. Major sources of social statistics
  2. Health Indicators
  3. GER, NER, and other educational statistics
- 14) Labor and employment
  1. Labor force, employment, underemployment, unemployment
  2. Major sources of labour and employment statistics
  3. Nepal Labour Force Surveys
  4. ISIC, ISOC, NSOC
  5. Child labour

15) Population statistics of Nepal

1. Major sources of population data
2. Population censuses of Nepal
3. Composition and distribution of population
4. Fertility, Mortality, Migration
5. Population growth and population projection

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