सांख्यिकी अधिकारी/संशोधन सहायक
बृहन्मुंबई महानगर पालिका, महापालिका वरिष्ठ सेवा

परीक्षेचे टप्पे:   **1)** लेखी परीक्षा - 200 गुण   **2)** मुलाखत- 50 गुण

-: परीक्षा योजना :-

विषय व सांकेतांक	माध्यम	गुण	प्रश्नसंख्या	कालावधी	दर्जा	प्रश्नपत्रिकेचे स्वरूप
सामान्य ज्ञान, बुध्दीमापन चाचणी आणि सांख्यिकी	मराठी व इंग्रजी इंग्रजी इंग्रजी	२००	१००	एक तास	पदव्युत्तर पदवी	वस्तुनिष्ठ बहुपर्यायी

अंतीम गुणवत्ता यादी ही वस्तुनिष्ठ परीक्षेतील व मुलाखतीतील एकत्रित गुणांवर आधारीत राहील.

-: अभ्यासक्रम :-

सामान्य अध्ययन, बुध्दीमापन चाचणी आणि सांख्यिकी या विषयामध्ये खालील घटक व उपघटकांचा समावेश असेल.

अभ्यासक्रम

अनु. क्र.		घटक व उप घटक
(1)		**सामान्य अध्ययन:-**
		भारताचा विशेषत: महाराष्ट्राचा इतिहास, भारताचा विशेषत: महाराष्ट्राचा भूगोल, भारतीय राज्यव्यवस्था राज्य प्रशासन व स्थानिक प्रशासन (ग्रामीण तसेच शहरी) यांची रचना, अधिकार व कार्ये, भारतीय अर्थव्यवस्था, सामान्य विज्ञान, राष्ट्रीय व आंतरराष्ट्रीय चालू घडामोडी.
(2)		**बुध्दिमापन चाचणी :-**
		उमेदवार किती लवकर व अचूकपणे विचार करु शकतो याचा अंदाज घेण्याच्या दृष्टिने या चाचणीमध्ये प्रश्न असतील.
(3)		**सांख्यिकी (Statistics)**
	I	**Data Collection :**
		Type of data, Quantitative and Qualitative data, Data for univariate and multivariate cases, Sources of data collection - Primary and Secondary Sources.
	II	**Presentation of Data:**
		A) Preparation of frequency tables - Univariate, Bivariate and Multivariate.
		B) Diagrammatic and Graphical presentation of data and its interpretation (Histogram, Ogives, Frequency Curve)
	III	**Elementary Statistical Methods :**
		A) Measures of Central tendency - Arithmetic Mean, Geometric Mean, Harmonic Mean, Median, Mode, Quartiles, Deciles, Percentiles.
		B) Measures of Dispersion - Absolute and Relative measures - Range, Quartile Deviation, Variance, Standard Deviation and Coefficient of variation.
		C) Concepts of skewness and Kurtosis.
		D) Correlation and Regression.

IV	**Probability:**	
	A) Concept of probability, Elementary laws of probability, Conditional probability, Bayes Theorem, Theory of Expectations.	
	B) Theoretical Probability Distributions- Binomial, Poission and Normal.	
V	**Theory of Statistical Inference:**	
	A) Theory of Estimation - Point Estimation and Interval Estimation - Concept of an Estimator, Desirable properties of an estimator, Methods of Estimation- Ordinary Least square method, Maximum Likelihood Method, Statement of Gauss Markov Theorem.	
	B) Hypothesis Testing: Simple and composite Hypothesis, Technique of testing of Hypothesis, Small and Large sample tests - t, Normal, Z and F tests contingency Tables.	
VI	**Interpretation of Linear Models:**	
	Models with one and more explanatory variables. Significance of regression coefficients, Goodness of fit (R^2)	
VII	**Sampling Methods**	
	Simple Random Sampling, Stratified Random Sampling, Systematic Sampling, Cluster Sampling, Multistage Sampling, use of auxiliary information.	
VIII	**Index Numbers and Time Series:**	
	A) Index Numbers - Types of Index Numbers - Price, Quantity and Cost of living. Methods of construction of Index Numbers.	
	B) Time Series Analysis - Components of a time series : Trend, Seasonal variation, Cyclical variation, random variation Fitting of trend - Moving Average method, Least square method.	
IX	**Statistical Organizations in India:**	
	Central Statistical Organization, National Sample Survey Organization, State Directorate of Economics and Statistics, The Reserve Bank of India, Registrar General of India, Types of data collected by them. i.e. Population Census, Economics Census, Agricultural Census, Forest Statistics, Livestock Census, Industrial Statistics, Trade Statistics, Labour Statistics	
X	**Vital Statistical in India:**	
	Different Birth Rates and death rates, Gross and Net reproduction rates, Infant Mortality rate. Life tables.	
XI	**National Income Estimation:**	
	Methods of National Income estimation concepts: Gross Domestic Product, Net Domestic Product, Gross National Product and Net National Product.	

NOTE : Latest and recent developments in the above topics will also be Expected from candidates.

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