SYLLABUS & WEIGHTAGE FOR COMPUTER BASED TEST ADVERTISEMENT No: 12/2026/CHQ/DR-CBT

MANAGER (CORPORATE PLANNING & MANAGEMENT SERVICES)

Total Marks: 120 **Duration: Two hours**

Part-A

General Knowledge, General Intelligence, General Aptitude, English etc. — Weightage 30%

Part-B

Questions on subjects relating to Educational Qualifications — Weightage 70%

1. STATISTICS

I. Frequency distribution and Measures of Location & Dispersion:

Calculation of standard deviation and moments, knowledge of skewness (Beta and Gama coefficients)

II. Probability: Definitions based on the set theory of probability outcome, sample space and events, law of probability, definition of random variable, definition of probability distribution- discrete and continuous.

i. Distributions: Definitions, mathematical expressions of Binomial, Poisson, Normal, Exponential, Beta, Gamma, Negative Binomial, Geometric, Multinomial, Rectangular and Cauchy Distributions. Practical examples of distributions in daily life. How to find out first, second and third moments of above distribution. Definition of Central Limit Theorem.

ii. Correlation and Regression: Definitions of correlation and regression coefficient, their limitations. Linear regression (definition), equations to the Lines of Regression, Linearity and Homoscedasticity of regression in bivariate normal distribution, Numerical based on correlation and regression. Definitions and limits of Intra-class correlation, multiple correlation, partial correlation, R square (coefficient of determination).

iii. Sampling Distribution: Definitions of t, Chi-square, F and Z distribution. Situations where these are used, sample numerical illustration, Test of significance, based on above distributions.

iv. Sampling and Survey:

a. Sampling theory, Sampling error, Non-sampling Error, Frame, Random or Probability sampling, Simple Random Sampling (with replacement and without replacement), complete enumerations versus Sampling, Method of Controlling Non Sampling Error, interpenetrating sub samples, Planning Sample Surveys, Definitions of Ad-hoc Surveys, Repetitive surveys, Questionnaires, Schedule, Distinction between sampling error and Standard Error, Mean Square Error and definitions of Multistage sampling, Multiphase sampling, their distinction, the principal steps in a sampling survey, role of sampling theory.

b. Simple Random Sampling (with and without replacement from finite and infinite population), variance of estimation.

c. Sampling Proportions and Percentage.

d. Estimation of Sample Size.

e. Knowledge of important terms in stratified, systematic and cluster sampling, variance of estimates, Role of Interclass correlation coefficient in sampling, Definitions of Ratio and Regression estimates.

v. Time Series analysis and its components: Trend Analysis, Seasonal Analysis, Cyclic Analysis, Random or Error Term, Simple problems.

vi. Demand Analysis: Law of Demand & Supply, Price elasticity of supply, Partial & Cross elasticity of demand, Engel's law & Engel's curve, Pareto's law of income distribution, Utility Function.

vii. Forecasting Techniques: Need for Forecasting, Techniques / methods involved in Forecasting, Problems encountered while forecasting and the solutions.

viii. Interpretation of Data

ix. Statistics relating to Indian economy.

2. ECONOMICS

I. Microeconomics: Demand & Supply Curve, Determination of Price & Quantity, Budget Line & Consumer Choice, Individual & Market Demand, Production & Cost of Production, Profit Maximization, Monopoly (Price & Output determination).

II. Macroeconomics: National Income & Product, Measurement of National Product & Problems in measurement of National Product, Aggregate Demand & Supply, Equilibrium income & output in two sector economy, Change in income & output-investment multiplier, Income consumption relationship, Determinants of consumption, Theory of income, output & employment.

III. Managerial Economics: Demand Forecasting, Forecasting with econometric model, Economic applications of differential calculus- Simple Problems, Economic forecasting for Business, Uses of Economic Forecasting and Methods of Economic Forecasting.

IV. International Economics: Nature & importance of international economics, Salient features of international Trade, Balance of Payment, Devaluation, Foreign Trade Multiplier.

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