

Syllabus : 2022-23 : Class XII : Statistics : Marks 70

1. Correlation & Regression : Bivariate data, Scatter diagram ; Correlation & correlation coefficient ; Properties of Correlation coefficient; Rank correlation; Spearman’s Rank Correlation Co-efficient.
Concept of Regression, Principle of Least Squares, Fitting of Regression lines, Important results relating to Regression lines.
2. Probability & Probability Distribution – I : Random experiment, trial, sample space, sample point and different types of events.
Definition of Probability : Classical, Statistical and axiomatic; theorems on Probability of union of two & three events; Conditional Probability – theorem on Conditional Probability for two & three events. Independence of Events; Bayes theorem and its applications.
3. Random variable (Discrete and Continuous) and its Probability distribution. Cumulative distribution function; probability mass function and Probability density function; mathematical expectation.
4. Mathematics : Standard definition of Gamma integral and results involving it (without derivation).
5. Probability Distribution- II : Uniform (Discrete and Continuous), Bernoulli, Binomial, Poisson and Normal distributions.
6. Sampling, Estimation and testing of Hypothesis : Population and sample; parameter and statistics, Census and Sample survey; Concepts of Probability sampling and Random number tables.

Concepts of Sampling distribution of statistic and its standard error; Simple Random Sampling with replacement and Simple Random Sampling without replacement (SRSWR).

Concept of point estimation : Requirement of Good Estimators- unbiasedness, Consistency, Efficiency.

Elementary Concept of MVUE and BLUE

Statistical test of Hypothesis – Null and Alternative Hypothesis. Simple and Composite hypothesis, critical region; Type I and Type II Errors; Level of Significance and Size of Critical region; Power of a test. Tests of significance related to a Single Binomial Proportion; Two Binomial proportions using large sample approximations; Exact test of hypothesis under normal set up for a single mean and Equality of two means. Frequency Chi-Square test and Good of fit.

Class XII : Statistics : Pre-Board/ Board Final : 2022-23 : Marks 70

Blue Print of Distribution of Marks

Topics	MCQ (1)	VSA (1)	SA I (2)	SA II (3)	LA I (4)	LA II (5)	Total Marks
1. Mathematics	-	-	-	-	-	5x1	5
2. Correlation & Regression	1x3	1x6	2x2	3x1	4x1	-	20
3. Probability & its Distribution- I	1x2	1x4	2x1	3x1	-	5x1	16
4. Probability Distribution II	1x2	1x4	2x1	3x1	4x1	-	15
5. Sampling, Estimation, Testing of Hypothesis	1x3	1x6	2x1	3x1	-	-	14
Total Marks (Questions)	10(10)	20(20)	10(5)	12(4)	8(2)	10(2)	70(43)