SYLLABUS – 2024- 2025

CLASS – **XI**

SUBJECT – **STATISTICS**

Total Marks – 70 **Practical - 30**

HALF-YEARLY EXAMINATION: 2024-2025

THEORY EXAMINATION, FULL MARKS: 70, TIME: 3 HOURS

Unit I: Introduction to Statistics

Definition and limitations of Statistics. Sample and Population, Qualitative and quantitative data. Collection of Statistical data (Primary & Secondary). Classification, Tabulation and diagrammatic representation (Pie chart, Line diagram and Bar diagram) of data. Discrete and continuous variable. Questionnaire. Frequency distribution and cumulative frequency distribution and their graphical representations (Histogram, Frequency Polygon, Frequency curve and Ogives).

Unit II: Mathematics

Arithmetic Progression (AP), Geometric Progression (GP), Permutation and Combination Binomial Expansions and Infinite Series.

Unit III: Descriptive Statistics-I

Concept of Central Tendency, different measures of Central Tendency (Mean, Median and Mode). Quartiles, Deciles and Percentiles.

PRACTICAL EXAMINATION

Three experiments to be given in the examination as follows:

1. Drawing of Pie chart, Line diagram and Bar diagram.

2. Drawing of Histogram, Frequency Polygon, Frequency curve and Ogives.

3. Computation of A.M., G.M. and H.M. from ungrouped and grouped data.

4. Computation of Median and Mode, Quartiles, Deciles and Percentiles from ungrouped and grouped data.

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Unit III: Descriptive Statistics-2

Concept of Dispersions, different measures of dispersions (Range, Quartile deviation, Mean deviation and Standard deviation), Relative measures of dispersions.

Moments, Sheppard's correction for moments (without proof), Skewness and Kurtosis and their measures based on moments and quartiles.

Unit IV: Time Series

Definition of Time Series, Different Components of Time Series, Different models involve in Time Series, Calculation of Trends by different methods (graphical method, method of semi average, method of moving average and method of least squares) with advantages and disadvantages. Calculation of seasonal components by different methods (method of simple average, ratio to trend and ratio to moving average) with advantages and disadvantages.

PRACTICAL EXAMINATION

Three experiments to be given in the examination as follows:

1. Computation of Range, Quartile deviation, Mean deviation, Standard deviation and coefficient of variation from ungrouped and grouped data.
2. Computation of different measures of Skewness and Kurtosis from ungrouped and grouped data.
3. Computation of trend by method of semi average, moving average and by method of least squares.
4. Computation of seasonal component by method of simple average, ratio to trend and ratio to moving average.

BLUE-PRINT OF DISTRIBUTION OF MARKS
HALF-YEARLY/ ANNUAL EXAMINATION: 2024-2025

Very Short Answer (VSA)	15 Questions x 2 Marks	15x2 = 30
Short Answer (SA)	5 Questions x 3 Marks	5x3 = 15
Long Answer (LA)	5 Questions x 5 Marks	5x5 = 25
	Total	**70**

BLUE-PRINT OF DISTRIBUTION OF MARKS (PRACTICAL)
HALF-YEARLY/ ANNUAL EXAMINATION: 2024-2025

1. Experiments (5+5+10)	20 Marks
2. Practical Note Book (PNB)	3 Marks
3. Viva-voce	2 Marks
4. Attendance	5 Marks
Total	**30 Marks**

CLASS- XI

SUB- STATISTICS

WEIGHTAGE TO TYPE OF QUESTIONS

Type of Questions	Marks (70)	Percentage
1. Very Short Answer Type Questions (VSA) (2x15) (Inclusive of Assertion, Reason, Differentiation & Stem)	**30**	**42.86**
2. Short Answer Type Questions (SA) (3x5) (Knowledge, Understanding, Application, Analysis, Evaluation, Synthesis & Create)	**15**	**21.43**
3. Long Answer Type Questions (LA) (5×5) (Knowledge, Understanding, Application, Analysis, Evaluation, Synthesis & Create)	**25**	**35.71**
	70	**100**

NOTE:-

i) Typology of questions:- MCQ, VSA, Assertion- Reasoning type questions; SA-I, SA-II, LA-I, LA-II, LA- III.

In LA- type questions source-based/ case- study based/ passage based questions may be included.

ii) Approximately 33 % internal choice would be given.