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FOR MANIPUR CLASS 11 PREPARATION

Manipur Board Class 11 Syllabus 2027 Statistics

EXAM	YEAR	TYPE	SUBJECT
Manipur Class 11	2027	Syllabus	Statistics

FROM THE ACADEMIC SESSION 2026-2027

STATISTICS

Theory

CLASS- XI

One Paper **Time: 3 Hours** **70 Marks**

Unit No.	Contents	Marks
1	Introductory Statistics	10
2	Descriptive Statistics	15
3	Correlation and Regression Analysis	15
4	Index Numbers	10
5	Method of Least Squares and Time Series Analysis	10
6	Design of Sample Survey	10

Unit No.	Contents	Marks	Periods
1	**Introductory Statistics:** Introduction, Meaning of Statistics, Importance and Scope of Statistics, Limitations of Statistics; Data and Types of data: Primary and Secondary data, Quantitative and Qualitative data, Discrete and Continuous data, Illustration with examples; Presentation of Data: Diagrammatic presentation – Bar diagram (simple, multiple, sub-divided), Pie diagram (concept only);Classification: Raw data and its classification, discrete frequency distribution, continuous frequency distribution, inclusive and exclusive methods of classification, open-end classes, cumulative frequency distribution; Graphical presentation of frequency distribution: Histogram, frequency curve, frequency polygon, Ogive.	10	20
2	**Descriptive Statistics:** Measures of Central tendency: Arithmetic Mean and its properties (without proof), Geometric Mean, Median and Mode; Relation between Mean, Median and Mode; Partition values: Quartiles, Deciles and Percentiles; Measures of Dispersion: Absolute dispersion – Range, Quartile deviation, Mean deviation from mean, Standard deviation; Relative dispersion: Co-efficient of mean deviation, Co-efficient of variation; Moments: Raw and Central moments (basic concepts only) and their relations (only upto fourth order); Skewness and Kurtosis, their measures based on moments and Pearson's β and γ coefficients.	15	25
3	**Correlation and Regression Analysis:** Correlation: Meaning of Correlation, Scatter diagram, Karl Pearson's correlation coefficient – limits for correlation coefficient, underlying assumptions; Regression Analysis: Introduction; Linear Regression –Lines of Regression, Regression coefficients, its Properties, Identification of regression lines from two given Regression equations.	15	25
4	**Index Numbers:** Meaning of index numbers; Basic Problems in the construction of index numbers; Construction of Index Numbers: Laspeyre's, Paasche's and Fisher's Index Numbers; Criteria of a Good Index Number: Time Reversal and Factor Reversal Tests; Cost of Living Index Number; Uses of Index Numbers.	10	20
5	**Method of Least Squares and Time Series Analysis:** Method of Least Squares, Normal equations, Curve fitting by the principles of Least Squares (first degree equation); Time Series and its Components, Mathematical Models of time series–Additive and Multiplicative Models; Uses of time series; Measurement of trend: Graphic Method, Semi-averages Method, Moving Average Method, and Method of curve fitting by Principle of Least Squares.	10	20
6	**Design of Sample Survey:** Introduction, Population and Sample, Parameters and Statistics, Principal Steps in a Sample Survey, Principles of Sample Survey, Sampling and Non-sampling Errors, Sampling vs Complete Census; Random numbers tables: Tippet' stables and Fisher and Yates Tables; Selection of Simple Random Sample: Lottery Method and Random Numbers Method; SRSWR, SRSWOR, Concept of Sampling Distribution of Sample Means and its Standard Error.	10	20

PRESCRIBED TEXTBOOKS:

1. Fundamentals of Mathematical Statistics
   By: S.C.Gupta and V.K. Kapoor [Sultan Chand & Sons]
2. Fundamentals of Applied Statistics
   By: S.C. Gupta and V.K. Kapoor [Sultan Chand & Sons]

STATISTICS

Practical

CLASS–XI

Time: 3 Hours **30 Marks**

LIST OF PRACTICALS

1. Construction of frequency distribution from a given raw data.
2. Diagrammatic representation of statistical data based on simple, multiple, sub-divided bar diagrams and pie diagram.
3. Graphical representation of statistical data (Histogram, Frequency curve, Frequency Polygon, Ogive).
4. Computation of measures of central tendency and dispersion.
5. Computation of coefficient of variation of a given frequency distribution and its interpretation.
6. Computation of first four Moments, measures of Skewness and Kurtosis.
7. Finding of Karl Pearson's correlation coefficient for a bivariate data.
8. Simple linear regression.
9. Tests based on Laspeyre's, Paasche's, Fisher's index numbers and test for ideal index number (Fisher's index number)–Factor and time reversal tests.
10. Test based on construction of Cost of Living index number.
11. Fitting of trend by Moving Average Method (both odd and even).
12. Drawing of Simple random sample of size10 from a statistical population of size 50 using random number table.

NOTE: Components of Practical.

1.	To attempt any 3 (three) experiments out of 5 (five) experiments.	(3×7=21 marks)
2.	Note Book.	(5 marks)
3.	Viva–voce	(4 marks)
	Total:	30 marks

DESIGN OF QUESTION PAPER

Subject : **STATISTICS**
Paper : Theory
Class : XI
Full Mark : 70
Time : 3 Hours

I — WEIGHTAGE TO OBJECTIVES

Objectives	Marks	Percentage
Knowledge (K)	10	14
Understanding (U)	35	50
Application (A)	21	30
Skill(S)	4	6
Total:	**70**	**100**

II — WEIGHTAGE TO FORMS OF QUESTIONS:

Form of Questions	No. of Question	Time (in minute)	Marks	Percentage
Essay/Long Answer (E/LA)	3	39	15	21
Short Answer (SA-I)	6	46	18	26
Short Answer (SA-II)	10	51	20	29
Very Short Answer (VSA)	7	18	7	10
MCQ	10	26	10	14
Total:	**36**	**180**	**70**	**100**

III — WEIGHTAGE TO CONTENT:

UNIT	CONTENTS	Marks	Percentage
1	Introductory Statistics	10	14
2	Description Statistics	15	22
3	Correlation and Regression Analysis	15	22
4	Index Numbers	10	14
5	Method of least Squares and Time Series Analysis	10	14
6	Design of Sample Survey	10	14
	Total :	**70**	**100**

IV — SCHEME OF SECTIONS : NIL

V — SCHEME OF OPTIONS :
i) Internal option will be given in 2 (two) Essay Type Questions
ii) Internal option will be given in 3 (three) Questions of SA-I including one case study/source based question.

VI — DIFFICULTY LEVEL :
Difficult : 30% of total mark
Average : 50% of total mark
Easy : 20% of total mark

Special Instruction:
1) Two questions of MCQ will be assertion-reason type question.
2) One question of SA-I will be case study/source based question.
3) First option will be (a) & second option will be (b) in the internal option

Abbreviation : K (Knowledge), U (Understanding), A (Application), Skill (S), E (Essay Type), SA (Short Answer Type), VSA (Very Short Answer Type), MCQ (Multiple Choice Question)