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TELANGANA TRIBAL WELFARE RESIDENTIAL DEGREE COLLEGE (WOMEN)

Recognized by UGC, India; Affiliated to Mahatma Gandhi University, Nalgonda.

DEPARTMENT OF STATISTICS

SYNOPSIS

TELANGANA TRIBAL WELFARE RESIDENTIAL DEGREE COLLEGE FOR WOMEN DEVARAKONDA	
Name of the Faculty: SK Ayesha	**Department: Statistics**
Course/Group: B.Sc-MSCs&MSDs	**Semester: I (Descriptive Statistics and Probability)**
Subject: Statistics	**Topic: Descriptive Statistics**
Learning objectives:	Student able to understand the data and acquire complete knowledge in measures of Central tendency and measures of dispersion using these they can get an idea about the data
Previous knowledge required:	Basic information about mean median mode and calculator knowledge
Synopsis:	• Collection of data and methods of collection • Primary data and secondary data • Designing questionnaire and a schedule • Measures of Central tendency (Mean, median mode, Geometric mean,Harmonic Mean) • Measures of dispersion(Range, quartile deviation, mean deviation, and standard deviation)
Illustrations/ Demonstration shown:	PPT presentation of data collection methods
Teaching aids used:	Black board, chalk piece, scientific calculator and Text book
References:	1. Fundamentals of Mathematical Statistics
Student activity planned/ homework given:	Collection of data, Find Measures of Central tendency and measures of dispersion of obtained data

2022-2023

Sign of the faculty

Principal's sign

TELANGANA TRIBAL WELFARE RESIDENTIAL DEGREE COLLEGE FOR WOMEN DEVARAKONDA	
Name of the Faculty: SK Ayesha	**Department: Statistics**
Course/Group: B.Sc-MSCs&MSDs	**Semester: I (Descriptive Statistics and Probability)**
Subject: Statistics	**Topic: Moments and measures of skewness and Kurtosis**
Learning objectives:	Student will be able to Understand the concept the of raw moments like central and non central moments Student will be able to know the peakedness of the curve
Previous knowledge required:	To know about the measures of Central tendency and measures of dispersion definitions properly
Synopsis:	• Central and Non central moments • Sheppard 's correction for moments • Measures of skewness • Kurtosis
Illustrations/ Demonstration shown:	PPT is used to show the different types of skewness and Kurtosis measures
Teaching aids used:	Black board, scientific calculator,chalk piece and Text book
References:	1.Fundamentals of mathematical statistics
Student activity planned/ homework given:	To find out the moments using grouped and ungrouped data and skewness and Kurtosis values

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TELANGANA TRIBAL WELFARE RESIDENTIAL DEGREE COLLEGE FOR WOMEN DEVARAKONDA	
Name of the Faculty: SK Ayesha	**Department: Statistics**
Course/Group: B.Sc-MSCs and MSDs	**Semester: I (Descriptive Statistics and Probability)**
Subject: Statistics	**Topic: Probability**
Learning objectives:	Student will be able to understand probability and get a complete knowledge of properties of probability
Previous knowledge required:	Basic knowledge in probability
Synopsis:	• Basic concepts in probability • Mutually exclusive events and exhaustive events • Addition and multiplication theorems • Conditional probability and independent events • Boole's and Bayes theorem
Illustrations/ Demonstration shown:	
Teaching aids used:	Black board, chalk piece, scientific calculator and Text book
References:	1. Fundamentals of Mathematical Statistics 2. Probability and statistical inference
Student activity planned/ homework given:	Find the probability of different types of events in indepedent events , find conditional probability and Find probability values using Baye's theorem

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TELANGANA TRIBAL WELFARE RESIDENTIAL DEGREE COLLEGE FOR WOMEN DEVARAKONDA	
Name of the Faculty: SK Ayesha	**Department: Statistics**
Course/Group: B.Sc-MSCs&MSDs	**Semester: I (Descriptive Statistics and Probability)**
Subject:Statistics	**Topic: Concept of Random Variables**
Learning objectives:	Student will be able to understand about random variables and probability mass function, probability density function and one dimensional random variables and bi variate random variables
Previous knowledge required:	Basic knowledge in integration
Synopsis:	• Definition of Random Variables • Discrete and Continuous Random Variables • Probability mass function • Probability density function • Distribution function and properties • Transformation of Random Variables • Concept of Bi-variate random variables • Joint, marginal and conditional distributions • Independence of Random Variables
Illustrations/ Demonstration shown:	
Teaching aids used:	Black board, chalk piece and Text book
References:	1. Fundamentals of Mathematical Statistics
Student activity planned/ homework given:	To find probability mass function and probability density function to the given data

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TELANGANA TRIBAL WELFARE RESIDENTIAL DEGREE COLLEGE FOR WOMEN DEVARAKONDA	
Name of the Faculty: SK Ayesha	**Department: Statistics**
Course/Group: B.Sc-MSCs& MSDS	**Semester: I (Descriptive Statistics and Probability)**
Subject:Statistics	**Topic: Mathematical Expectation**
Learning objectives:	Student will be able to understand the concept of Expectation.
Previous knowledge required:	Concept of Random Variables and definition of a function
Synopsis:	• Mathematical Expectation of a function • Raw moments using expectation • Central moments using expectation • Addition and multiplication theorems of • Expectation
Illustrations/ Demonstration shown:	
Teaching aids used:	Black board, chalk piece and Text book
References:	1. Fundamentals of Mathematical Statistics
Student activity planned/ homework given:	- Finding expected values of moments

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TELANGANA TRIBAL WELFARE RESIDENTIAL DEGREE COLLEGE FOR WOMEN DEVARAKONDA	
Name of the Faculty: SK Ayesha	**Department:Statistics**
Course/Group: B.Sc-MSCs & MSDs	**Semester: I (Descriptive Statistics and Probability)**
Subject: Statistics	**Topic: Generating functions and Probability Inequalities**
Learning objectives:	Student will be able to find the moment generating function and cumulative-generating function and characteristic function..etc
Previous knowledge required:	Basic integration formulas and Concept of Random Variables
Synopsis:	• Definition of Moment Generating function • Cumulative Generating function • Probability Generating function • Characteristic function • Chebyshev's inequality • Cauchy- Schwartz's inequality
Illustrations/ Demonstration shown:	PPT presentation of generating function
Teaching aids used:	Black board, chalk piece and Text book
References:	Fundamentals of Mathematical Statistics
Student activity planned/ homework given:	Determine the generating function of given data

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TELANGANA TRIBAL WELFARE RESIDENTIAL DEGREE COLLEGE FOR WOMEN DEVARAKONDA	
Name of the Faculty: SK Ayesha	**Department:Statistics**
Course/Group: B.Sc-MSCs&MSDs	**Semester: II (Probability Distributions)**
Subject: Statistics	**Topic: Descrete Distributions**
Learning objectives:	Student will be able to understand, analyze and identify the Descrete Distributions and application of discrete distributions
Previous knowledge required:	Concept of Probability and random variables
Synopsis:	• Uniform distribution • Bernoulli distribution and application • Binomial distribution and application • Poisson distribution • Negative binomial distribution • Geometric Distribution • Hyper -Geometric distribution
Illustrations/ Demonstration shown:	PPT presentation of discrete distributions
Teaching aids used:	Black board, chalk piece, scientific calculator and Text book
References:	Fundamentals of Mathematical Statistics
Student activity planned/ homework given:	Draw the different distribution curves and calculate probabilies of events using discrete distributions

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TELANGANA TRIBAL WELFARE RESIDENTIAL DEGREE COLLEGE FOR WOMEN DEVARAKONDA	
Name of the Faculty: SK Ayesha	**Department: Statistics**
Course/Group: B.Sc-MSCs& MSDs	**Semester: II (Probability Distributions)**
Subject:Statistics	**Topic: Properties of Discrete distributions**
Learning objectives:	Student will learn properties of discrete distributions
Previous knowledge required:	Probability Mass function of all discrete distributions
Synopsis:	• Properties of discrete distributions • Reproductive property of discrete distributions • Binomial approximation to Hyper-Geometric Distribution • Poisson approximation to Binomial distribution • Poisson approximation to negative binomial distribution
Illustrations/ Demonstration shown:	
Teaching aids used:	Black board, chalk piece and Text book
References:	Fundamentals of Mathematical Statistics
Student activity planned/ homework given:	Find mgf and cgf,pgf and characteristic function to the given data

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TELANGANA TRIBAL WELFARE RESIDENTIAL DEGREE COLLEGE FOR WOMEN DEVARAKONDA	
Name of the Faculty: SK Ayesha	**Department:Statistics**
Course/Group: B.Sc-MSCs& MSDs	**Semester: II (Probability Distributions)**
Subject:Statistics	**Topic: : Continuous Distributions**
Learning objectives:	Student will be able to understand the different types of continuous distributions
Previous knowledge required:	Basic knowledge in Random Variables
Synopsis:	• Rectangular distributions • Normal distributions • Normal distribution as a limiting case of binomial and Poisson distributions • Exponential distribution • Gamma distribution • Beta of I and II kind distribution • Cauchy- distribution
Illustrations/ Demonstration shown:	
Teaching aids used:	Black board,chalk piece and text book
References:	Fundamentals of Mathematical Statistics
Student activity planned/ homework given:	Construction of continuous distributions using given data

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TELANGANA TRIBAL WELFARE RESIDENTIAL DEGREE COLLEGE FOR WOMEN DEVARAKONDA	
Name of the Faculty: SK Ayesha	**Department: Statistics**
Course/Group: B.Sc-MSCs & MSDS	**Semester: II (Probability Distributions)**
Subject: Statistics	**Topic: Properties of continuous distributions**
Learning objectives:	Student will be able to understand all the properties of continuous distributions
Previous knowledge required:	Probability density function of continuous distributions
Synopsis:	• Moment generating function • Cumulative Generating function • Characteristic function • Moments • Reproductive properties
Illustrations/ Demonstration shown:	
Teaching aids used:	Black board and chalk piece,PPT,Textbook
References:	Fundamentals of Mathematical Statistics
Student activity planned/ homework given:	To find the moment generating function and characteristic function of continuous distributions

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TELANGANA TRIBAL WELFARE RESIDENTIAL DEGREE COLLEGE FOR WOMEN DEVARAKONDA	
Name of the Faculty: SK Ayesha	**Department: Statistics**
Course/Group: B.Sc-MSCs&MSDs	**Semester: II (Probability Distributions)**
Subject:Statistics	**Topic: Laws of numbers and identically independent random variables**
Learning objectives:	Students will be able to understand laws in large numbers
Previous knowledge required:	Basic knowledge of limit theorem
Synopsis:	• Statement of weak law of large numbers • Statement of strong law of large numbers • Central limit theorem • Identically independently distributed random variables
Illustrations/ Demonstration shown:	
Teaching aids used:	Black board, chalk piece, Text book
References:	Fundamentals of Mathematical Statistics
Student activity planned/ homework given:	- Seminar on weak law of large numbers and strong law of large numbers

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