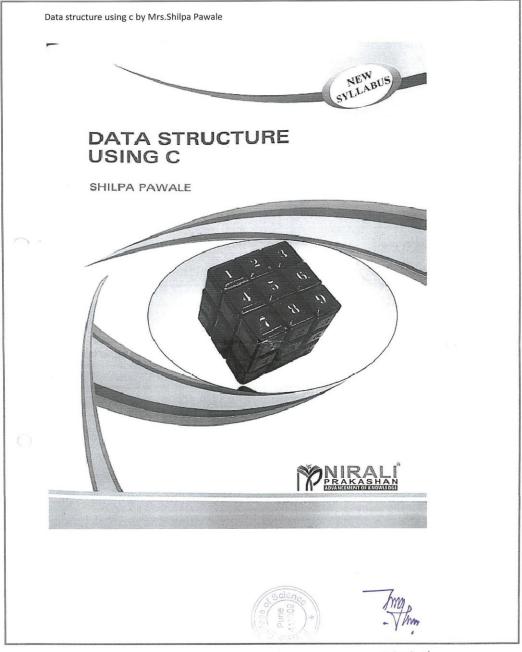
P.V.G.'s College of Science, Pune 9 3.3.5 Number of books and chapters in edited volumes/books published and papers in national/international conference proceedings per teacher during the last five years.

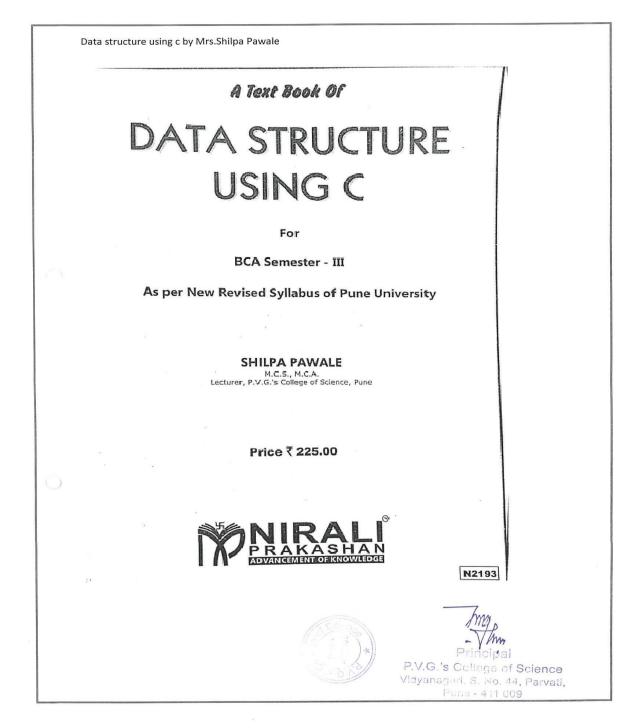
Data Structure using C by Mrs.Shilpa Pawale



Principal P.V.G.'s College of Science Vidyanagari, S. No. 44, Parvati, Pune - 411 009

3.3.5 Number of books and chapters in edited volumes/books published and papers in national/international conference proceedings per teacher during the last five years.

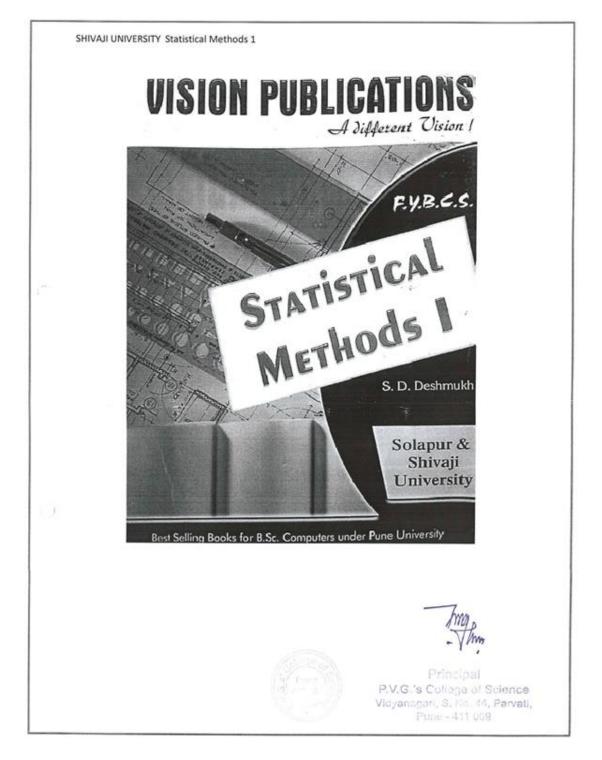
Data Structure using C by Mrs.Shilpa Pawale



D	ata structure using c by Mrs.Shilpa Pawale	
	Contents	
	1. Basic Concept and Introduction to Data Stru	cture 1.1 - 1.44
	2. Searching and Sorting Techniques	2.1 - 2.32
Ô.	3. Linked List	3.1 - 3.56
	4. Stack and Queue	4.1 - 4.62
	5. Trees	5.1 - 5.62
	6. Graphs	6.1 - 6.42
0		
		Principal Principal P.V.G.'s College of Science Vidyanagari, S. No. 44, Parvati, Pune - 411 009

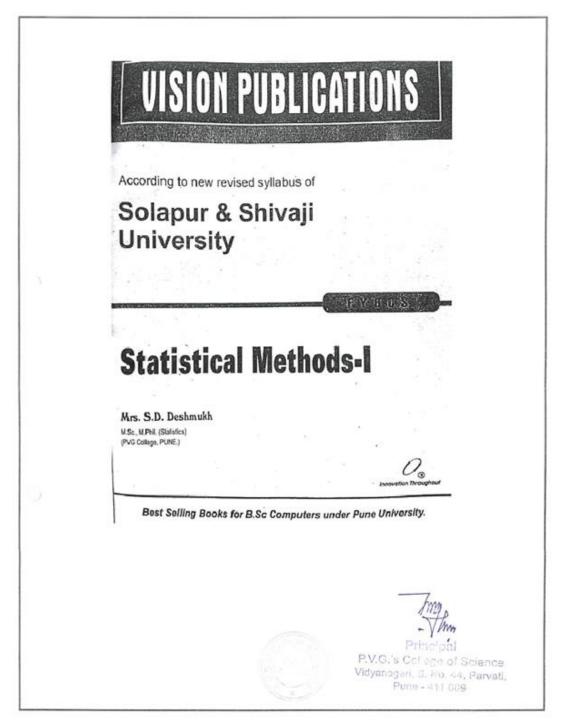
P.V.G.'s College of Science, Pune 9 3.3.5 Number of books and chapters in edited volumes/books published and papers in national/international conference proceedings per teacher during the last five years.

Statistical Methods - I by Mrs.Surekha Deshmukh



P.V.G.'s College of Science, Pune 9 3.3.5 Number of books and chapters in edited volumes/books published and papers in national/international conference proceedings per teacher during the last five years.

Statistical Methods - I by Mrs.Surekha Deshmukh



CONTENTS
1. INTRODUCTION TO STATISTICS
1.1 Introduction
1.2 Definition of Statistics 1.1 1.3 Importance of Statistics 1.3
1.4 Scope of Statistics 1.3
2. POPULATION AND SAMPLE
2.1 Introduction 2.1 2.2 Population and Sample 2.1
2.3 Types and Methods of Sampling 2.3
2.3.1. Simple Random Sampling (SRS) 2.4 2.3.2. / Stratified Random Sampling 2.5
2.3.3 Systematic Sampling 2.6 2.3.4 Limitations of Sampling 2.7
3. DATA CONDENSATION AND GRAPHICAL METHODS 3-1
3.1 Introduction 3.1
3.2 Attributes and Variables
3.3 Classification 3.2 3.4 Frequency Distribution 3.3
3.5 Cumulative Frequency Distribution
3.6 Relative Frequency Distribution
3.7 Graphical Representation of Frequency Distribution
3.7.2 Frequency Polygon 3.12 3.7.3 Frequency Curve 3.13
3.7.4 Onive or Cumulative Prequency Curve: 3.15
3.8 Diagrams 3.17 3.8.1 Simple Bar Diagram 3.17
3.8.2 Sub-divided Bar Diagram 3.17 3.8.3 Pin Diagram 3.18
4. MEASURES OF CENTRAL TENDENCY 4.1
4.1 Introduction
4.2 Objectives and Requisites of a Good Average
4.3 Arithmetic Mean
- 3 -
hun
and p
- Vmm
Principal
P.V.G.'s College of Science Vidyanagari, S. No. 44, Parvati, Punus

	43.1 Calculation of Arithmetic Mean 4.3
	43.2 Correcting Wrang Values 4.6 4.3.3 Properties of Arithmetic Mean 4.8
	4.3.4 Merits and Devents of Arithmetic Mean 4.11
	4.4 Weighted Arithmetic Mean
	4.5 Median
	45.3 Merits and Themerits of Median: 4.17
	4.6 Mode
	4.6.2 Morin and Domenia of Modo 4.21
	4.7 Eropirical Relationship Among Mean, Median and Moder
	4.8 Appropriate Choice of an Average 4.22 4.9 Quartiles 4.22
	4.3.1 Calculation of Quartiles 4.22
5.	MEASURES OF DISPERSION 5.1
	5.1 Introduction
	5.2 Requisites for an Ideal Measure of Dispersion
	5.3 Absolute and Relative Measures of Dispersion52
	5.4 Range
	5.4.2 Merils and Demerita of Range 5.4
	S.5 Variance and Standard Deviation
	5.5.2 Standard Deviation (S.D) 5.6
	3.5.3 Properties of Variance and Standard Deviation 5.7 5.5.4 Merits and descerits of variance 3.10
	5.6 Coefficient of Variation 5.11
6.	MOMENTS
0.	6.1
	6.1 Introduction
	6.6 Properties of Comman Properties
7.	MEASURES OF SKEWNESS AND KURTOSIS
	7 I Introduction
	7.2 Skewness
	·b.
	Thus
	1 may n
	Vitre
	- Yrim
	and the second sec
	Principal
	P.V.G.'s College of Science
	transfer an and a second of the second of th
	Vidvanagan S top 46 Caruali
	Vidyanogoni, S. No. 44, Parvati, Puna - 411 009

7.2.1 Positively Skewed Distribution 7.2 7.2.2 Negatively Skewed Distributions 7.2
7.3 Measures of Skewpess
7.5 Pearsoian Coefficients to Measure Skewness and Kurtosis based on
7.9 7.6 Choice of a Measure of Skewness and Kurtosis
8. CORRELATION
8.1 Introduction
8.2 Bivariate Data 8.1 8.3 Correlation 8.2
8.4 Positive and Negative Correlation
8.5 Methods of Studying Correlation 8.2 8.6 Scatter Diagram Method. 8.3
8.7 Covariance 8.4
8.7.1 Definition: 3.4 - 6.7.2 Properties of covariance: 8.5
8.9 Karl Pearson's Coefficient Of Correlation
8.9.2 Properties of Completion Coefficient 8.9
8.9.3 Merita and Demerits of Pearsonian Coefficient of Correlation 8.18 9. REGRESSION 9.1
9.2 Lines of Regression
9.2.1 Derivation of line of Regression of Y on X 9.2 9.2.2 Line of Regression of X on Y 9.5
9.3 Properties of Regression Coefficient
9.4 Angle Between the two Lines of Regression9.9 9.5 Non- linear Regression0.19
9.5.1 Fitting of Second Degree Parabola 9.19
9.5.2 Fining of exponential curve 9.20 10. MULTIPLE REGRESSION, MULTIPLE AND PARTIAL
10. MULTIPLE REGRESSION, SIGLIFILE AND FARMAE
10.1 Introduction
10.2 Notation
10.2 (Vale's Notation
10.3 Flane of Regression
-c-
tron.
The
- Ymm
a harden
(3(Pong)) Principal
P.V.G.'s Cottego of Science
Vidyansgart, S. Ho. 44, Parvati,

	en en en ser en ser en
	10.5 Interpretation of Partial Regression Coefficients
	10.6 Multiple Completion Coefficient
	10.7 Partial Correlation Coefficient
	11. TIME SERIES
	11.1 Introduction
	11.2 Utility of Time Series
	11.3 Components of Time Series
	11.3.1 Socialize Typend (T) 11.2 11.3.2 Seaseaul Variations (S) 11.3
	11.3.3 Cyclical Variations (C) 11.3 11.3.4 Integular or Random Variations (I) 11.4 11.4 Mathematical Models of Time Series
	11.4 Mathematical Models of Time Series
	11.4.1 Additive Model 11.4 11.4.2 Modeline Joint Card 11.4
	11.4.1 Additive Model 11.4 11.4.2 Multiplicative Model 11.4 11.4.2 Multiplicative Model 11.4 11.5 Methods of Estimating Trend
	11.5.1 Moving Average Method 11.5 11.5.2 Method of Least Squares 11.8 12. INDEX NUMBERS
	12.1 Introduction
	12.2 Need of Index Numbers
	12.3.1 Parpose of Index Nombers 12.3
	12.3.2 Selection of Commodities 12.2 12.3.3 Selection of Weights 12.2
	12.14. Selection of the Base 19.3
	12.3.5.Selection of the Sources of Data 12.3
	12.3.6. Selection of Average or Formula 12.4 Construction of Index Numbers
	12.4 Construction of Index Numbers 12.3 12.4.1 Unweighted Index Numbers 12.4
	12.5 Limitations of Index Numbers 12.5 APPENDIX
	(i) Difference and the second seco
S	
	é and)
	- d -
	men .
	The
	- Yrim
	Pune (0)
	(o) Amos Principal
	P.V.G.'s College of Science
	Vidyanagari, S. No. 44, Parvati,
	Pune - 411 009

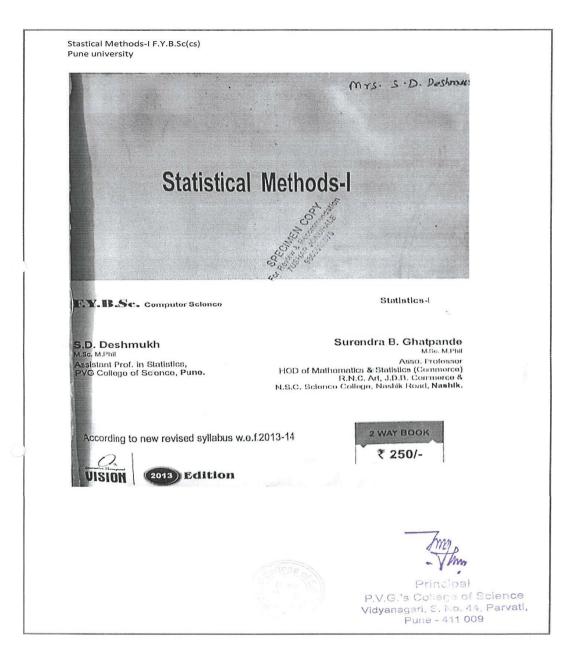
P.V.G.'s College of Science, Pune 9 3.3.5 Number of books and chapters in edited volumes/books published and papers in national/international conference proceedings per teacher during the last five years.

Statistical Methods - I by Mrs.Surekha Deshmukh



P.V.G.'s College of Science, Pune 9 3.3.5 Number of books and chapters in edited volumes/books published and papers in national/international conference proceedings per teacher during the last five years.

Statistical Methods - I by Mrs.Surekha Deshmukh



<section-header><section-header><section-header><section-header><section-header><section-header><section-header><section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header>		
Data Condensation and Graphical Methods 11 1.1 Attributes and Variables 111 2.1 Attributes and Variables 111 2.1 Frequency Distribution 1-4 2.3 Bulative Frequency Distribution 1-10 3.5 Bulative Frequency Distribution 1-10 4.1 Frequency Distribution 1-10 5.3 Bulative Frequency Distribution or Diagrams 1-73 4.1 Simple Bar Diagram 1-14 4.2 Sub-Divide Ear Diagram 1-14 5.4 Stabalbo Diagram 1-16 6.5 Stabalbo Diagram 1-16 7.1 Authonic Kean 2-15 7.3 Model 2-23 7.1 Authonic Kean 2-15 7.3 Model 2-23 7.4 Weighted Anthoneic Kean 2-15 7.3 Model 2-23 7.4 Weighted Anthoneic Kean 2-15 7.3 Model 2-23 7.4 Weighted Anthoneic Kean 2-15 7.5 Recention 2-36 <th></th> <th></th>		
Data Condensation and Graphical Methods 11 1 Attributes and Variables 1-1 2 Classification 1-4 2.1 Frequency Distribution 1-9 2.3 Relativo Frequency Distribution 1-9 2.3 Relativo Frequency Distribution 1-0 4.1 Sirgen Reguency Distribution 1-10 5.3 Stem and Leaf Chart 1-10 6.4 Sirgen Bar Diagram 1-13 7.5 Sirgen Bar Diagram 1-16 7.6 Sirgen Bar Diagram 1-16 7.7 Sirgen Bar Diagram 1-16 7.8 Stabe Divide Bar Diagram 1-16 7.9 Stabe Divide Bar Diagram 1-16 7.1 Antimetic Mean 2-16 7.1 Antimetic Mean 2-17 7.2 Stabe Divide Divide Charts 2-16 7.3 Modia 2-16 7.4 Mode 2-37 7.5 Star Plane 2-37 7.6 Preventile Bar Standard Daviation 2-56 7.1 Quarito Deviation 2-56<	Conte	nts
1. Attributes and Variables 1-1 2. Classification 1-2 2.1 Frequency Distribution 1-3 2.3 Relative Frequency Distribution 1-3 2.3 Relative Frequency Distribution 1-10 3. Stem and Led Chat 1-10 4.1 Striptical Presentation of Frequency Distribution or Diagrams 1-10 4.1 Striptical Presentation of Frequency Distribution or Diagrams 1-11 4.2 Sub-Divided far Diagram 1-14 4.3 Pre Diagram 1-16 4.5 Less than and Mere than Type Ogive Curves 1-13 4.6 Cheice of Suitable Diagram 1-16 4.7 Weighted Arithmetic Mean 2-15 4.8 Median 2-16 4.9 Media 2-16 4.1 Media 2-30 2.2 Devise 2-30 2.3 Presentities 2-36 2.4 Presentities 2-36 2.5 Devise 2-37 2.5 Devise 2-30 2.6 Devise 10 2-39 3. Goefficient of Variation 2-58 3.1 Outwike Devisition 2-58 3.2 Devise 2-30 3.2 Outwike Devisition 2-58	Data Condensation and Graphical Methods	
2. Classification 1-4 2.1 Frequency Distribution 1-9 2.3 Relative Frequency Distribution 1-10 4.3 Stem and Leaf Chart 1-10 4.4 Stephical Presentation of Frequency Distribution or Diagrams 1-13 4.1 Stephical Presentation of Frequency Distribution or Diagrams 1-13 4.1 Stephical Presentation of Frequency Distribution or Diagrams 1-13 4.1 Stephical Presentation of Frequency Distribution or Diagrams 1-13 4.1 Stephical Presentation of Frequency Distribution or Diagrams 1-13 5.1 Stephical Presentation of Prequency Distribution or Diagrams 1-13 6.1 Stephical Presentation of Descriptive Statistics 90 7.1 Anthreading Mann 2-16 7.2 Weighted Arithmetic Mean 2-15 7.3 Modan 2-16 7.4 Modan 2-37 7.5 Representiles 2-37 7.6 Antroposition 2-56 7.7 Develop Mannets 2-51 7.8 Moments 2-56 7.9 Val	Introduction	
2.1 Frequency Distribution 1-9 2.3 Rolativo Frequency Distribution 1-10 3. Stem and Leaf Chart. 1-10 4. Graphical Presentation of Frequency Distribution or Diagrams. 1-13 4.1 Stripe Bar Diagram 1-14 4.2 Stub Divided Ear Diagram 1-14 4.3 Pie Diagram 1-16 4.4 Choleo of a Suitablo Diagram 1-18 5.4 Choleo of a Suitablo Diagram 1-18 7.5 Less than and More than Type Ogive Curves 1-18 Review/Revision of Descriptive Statistics 7.1 Avitable Maan 2-15 7.3 Modula 2-18 7.4 Mode 2-24 2-23 7.5 Appropriate Choleo of an Average 2-23 7.1 Quarties 2-30 7.2 Veighteed Arithmetic Mean 2-15 7.3 Modulas 2-36 7.4 Description 2-56 7.5 Review Heavision 2-56 7.6 Outries 2-30 7.7 Chalpande <td>1. Attributes and Variables</td> <td>1.2</td>	1. Attributes and Variables	1.2
2.2 Gunutarive Fraquency Distribution 1-10 3. See and Lead Chart. 1-10 4. Graphical Presentation of Frequency Distribution or Diagrams. 1-13 1.1 Stude Divide Ear Diagram 1-14 3. Pie Diagram 1-16 4. Stude Divide Ear Diagram 1-16 5. Sube Divide Ear Diagram 1-16 6. Choice of a Svitable Diagram 1-16 7. Choice of a Svitable Diagram 1-18 7. Anthmetic Mean 2-15 7. Anthmetic Mean 2-15 7. Medasure of Central Tendency. 2-23 7. Medasure of Central Tendency. 2-24 7. Mode 2-24 7. Outrilies 2-30 2. Device 2-35 2. Partition Values 2-36 2. Device 2-35 2. Device 2-35 2. Device 2-35 2-32 2. Device 3-39 10 3. Contrale Dovicion 2-55 3.3 Contral Moments 3-3		
2.3 Rolative Fraquency Distribution 1-10 3. Stem and Leaf Chart. 1-13 4. Straphical Presentation of Frequency Distribution or Diagrams. 1-13 4. Straphical Presentation of Frequency Distribution or Diagrams. 1-13 4. Straphical Presentation of Frequency Distribution or Diagrams. 1-13 4. Straph Bar Diagram 1-16 5. Pre Diagram 1-16 4. Cheice of a Suitable Diagram 1-16 5. Less than and More than Type Ogive Curves 1-16 7. Anhmelic Mean 2-15 7. Median 2-16 7. Weightee Anhmelic Mean 2-15 7. Audition 2-18 7. Partition Values 2-26 7. Partition Values 2-30 7. Pountiles 2-30 7. Partition Values 2-37 7. Partition Values 2-37 7. Presentiles 2-37 7. Presentiles 2-37 7. Parecentiles 2-37	Sales and the second	ida
4. Graphical Presentation of Frequency Distribution or Diagrams 1.1-13 4.1 Simple Bar Diagram 1-13 4.2 Sub-Divaded Ear Diagram 1-14 4.3 File Diagram 1-16 4.5 Less than and More than Type Ogive Curves 1-18 4.5 Less than and More than Type Ogive Curves 1-18 4.6 Sub-Divation of Descriptive Statistics 96 1.1 Arthmetic Mean 2-15 1.3 Median 2-15 1.3 Median 2-16 1.4 Media 2-24 1.5 Appropriate Civicu of an Average 2-23 2.1 Quarities 2-30 2.2 Devices 2-36 2.3 Percentile Rank 2-37 2.4 Percentile Rank 2-37 2.5 Box Plot 2-39 3.1 Contribe Devizion 2-56 3.2 Certicant of Variation 2-56 3.2 Certicant of Variation 2-56 3.3 Coefficient of Variation 2-56 3.4 Central	2.3 Relative Frequency Distribution 1-10	he of the strength of the
4. Graphical Presentation of Frequency Distribution or Diagrams 1.1-13 4.1 Simple Bar Diagram 1-13 4.2 Sub-Divaded Ear Diagram 1-14 4.3 File Diagram 1-16 4.5 Less than and More than Type Ogive Curves 1-18 4.5 Less than and More than Type Ogive Curves 1-18 4.6 Sub-Divation of Descriptive Statistics 96 1.1 Arthmetic Mean 2-15 1.3 Median 2-15 1.3 Median 2-16 1.4 Media 2-24 1.5 Appropriate Civicu of an Average 2-23 2.1 Quarities 2-30 2.2 Devices 2-36 2.3 Percentile Rank 2-37 2.4 Percentile Rank 2-37 2.5 Box Plot 2-39 3.1 Contribe Devizion 2-56 3.2 Certicant of Variation 2-56 3.2 Certicant of Variation 2-56 3.3 Coefficient of Variation 2-56 3.4 Central	3. Stem and Leaf Chart	
4.1 Simple Bar Diagram 1-14 4.2 Sub-Divided Ear Diagram 1-14 4.3 Fie Diagram 1-16 4.4 Choice of a Suitable Diagram 1-18 4.5 Less than and More than Type Ogive Curves 1-18 Review/Revision of Descriptive Statistics 96 . Measure of Central Tendency. 1.1 Arthmetic Mean 2-15 1.3 Media 2-18 1.4 Media 2-24 1.5 Appropriate Choice of an Average 2-29 2.1 Quartiles 2-30 2.2 Derition Values 2-37 2.3 Devices 2-36 2.4 Percentiles 2-36 2.5 Devices 2-37 3.1 Outrido Devizion 2-56 3.2 Cellopersion 3-1 1.6 Introcoluction <td< td=""><td>4, Graphical Presentation of Frequency Distribution or Diagrams</td><td></td></td<>	4, Graphical Presentation of Frequency Distribution or Diagrams	
1.3 Pie Diagram 1-16 1.4 Choice of a Suitable Diagram 1-18 1.5 Less than and More than Type Ogice Curves 1-18 Review/Revision of Descriptive Statistics 1. Measure of Central Tendency. 2-2 1.1 Anhmeic Mean 2-15 1.3 Median 2-16 1.4 Mode 2-24 1.5 Appropriate Choice of an Average 2-23 2.1 Quartiles 2-30 2.2 Devices 2-30 2.3 Percentiles 2-37 2.5 Box Plot 2-39 3.4 Outarities 2-37 2.5 Box Plot 2-39 3.6 Central Rank 2-37 2.5 Box Plot 2-39 3.1 Outaritie Deviation 2-56 3.2 Contract Rank 2-51 3.3 Central Moments 3-3 4.5 Central Moments 3-3 4.6 Chatgand 3-3 5.7 Secon Plot 3-3 1	4.1 Simple Bar Diagram 1-13	and the second
4.4 Choice of a Suitable Diagram 1-18 4.5 Less than and More than Type Ogine Curves 1-18 Review/Revision of Descriptive Statistics 90 1. Antimetic Mean 2-3 1.2 Weighted Antimetic Mean 2-15 1.3 Median 2-18 1.4 Mode 2-24 1.5 Appropriate Clouice of an Average 2-29 2.1 Quartiles 2-30 2.2 Quartiles 2-30 2.1 Quartiles 2-30 2.2 Durities 2-30 2.3 Durities 2-30 2.4 Persentiles 2-36 2.4 Persentiles 2-37 2.5 Boy Floi 2-37 2.5 Duritie Deviation 2-58 3.3 Coefficient of Variation 2-58 3.4 Coefficient of Variation 2-58 3.5 Ceetificient of Variation 2-58 3.6 Central Moments 3-31 3.7 Event of Moments 3-33 3.6 Central	ALL OUL DIVIDED Las Didgitain	and the second second
Review/Revision of Descriptive Statistics 96 1. Measure of Central Tendency	4.4 Choice of a Suitable Diagram 1-18	
1. Measure of Central Tendency. 22 1.1 Anhmetic Mean 2-3 1.2 Weighted Anithmetic Mean 2-15 1.3 Median 2-18 1.4 Mcda 2-24 1.5 Appropriate Choice of an Average 2-29 2. Partition Values 2-30 2.1 Quartiles 2-30 2.2 Devices 2-30 2.3 Percentiles 2-36 2.4 Percentiles 2-37 2.5 Box Plot 2-39 3. Percentiles Rank 2-37 2-55 3.1 Outrile Deviation 2-56 3.2 Variance and Sinndard Deviation 2-58 3.3 Cediticient of Variation 2-58 3.3 Central Moments 3-3 3.4 Percentile Rank 5-37 3-3 3.5 Central Moments 3-3 3.6 Central Moments 3-3 3.6 Central Moments -1- 1420 -1- 1420 <td></td> <td>06</td>		06
1. Arbmetic Mean 2-15 1.2 Weighted Arithmetic Mean 2-15 1.3 Media 2-18 1.4 Mode 2-24 1.5 Appropriate Choice of an Average 2-29 2.1 Quarities 2-30 2.2 Deviles 2-30 2.3 Percentilles 2-37 2.5 Box Plot 2-37 2.5 Box Plot 2-39 3. Measure of Dispersion 2-55 3.1 Quaritie Deviation 2-56 3.3 Coefficient of Variation 2-58 3.4 Central Moments 3-3 3.5 Central Moments 3-3 3.6 Central Moments 3-3 3.6 Central Moments 3-3 4.1 *1* 435 <td></td> <td>Construction Construction ()</td>		Construction Construction ()
1.2 Weighted Anihmetic Mean 2-15 1.3 Modian 2-18 1.4 Mode 2-24 1.5 Appropriate Choice of an Average 2-29 2. Partition Values 2-30 2.1 Quarities 2-30 2.1 Quarities 2-36 2.3 Percentile Rank 2-37 2.5 Box Plot 2-39 3. Measure of Dispersion 2-55 3.1 Quartile Deviation 2-56 3.2 Variance and Standard Deviation 2-58 3.3 Coefficient of Variation 2-56 3.3 Coefficient of Variation 2-56 3.3 Coefficient of Variation 2-58 3.3 Coefficient of Variation 2-54 16 Introduction 3-1 3.4 Chatyande 3-1 3.5 Central Moments 3-3 4 4 4 4 4 4		
1.4 Mcde 2-24 1.5 Appropriate Christer of an Average 2-29 2. Partition Values 2-30 2.1 Quartiles 2-30 2.2 Deviles 2-37 2.5 Box Piol 2-37 2.6 Percentile Rank 2-37 2.7 2.5 Box Piol 2-37 2.6 Percentile Rank 2-37 2.7 2.5 Box Piol 2-37 2.5 Box Piol 2-39 3. Measure of Dispersion 2-58 3.3 Coefficient of Variation 2-58 3.3 Coefficient of Variation 2-58 3.4 Chestpande -3-1 2. Raw Moments (About Origin) -3-1 3. Central Moments -3-3 3. Central Moments -3-3 3.4 -1 -1 4.1 -1 -1 4.1 -1 -1	1.2 Weighted Arithmetic Mean 2-15	
1.5 Appropriate Choice of an Average 2-23 2. Partition Values 2-30 2.1 Quartiles 2-30 2.2 Deviles 2-35 2.3 Percentile Rank 2-37 2.5 Box Plot 2-39 3. Measure of Dispersion 2-55 3.1 Ouartile Deviation 2-56 3.2 Variance and Shandard Deviation 2-58 3.3 Coefficient of Variation 2-64 Moments 16	Company Company	de
2. Partition Values .2-23 2.1 Quartiles 2-30 2.2 Deviles 2-36 2.3 Percentile Rank 2-37 2.5 Box Plot 2-39 3. Measure of Dispersion 2-55 3.1 Outleb Deviation 2-55 3.2 Variance and Standard Deviation 2-58 3.3 Coefficient of Variation 2-54 Moments 16 1. Introduction 3-1 2. Raw Moments (About Origin) 3-1 3. Central Moments 3-3 Methods-1 -1 492		
2.1 Quartiles 2-30 2.2 Deviles 2-35 2.3 Persentile Rank 2-37 2.5 Bay Plot 2-39 3. Measure of Dispersion 2-55 3.1 Ouartile Deviation 2-55 3.2 Variance and Standard Deviation 2-58 3.3 Coefficient of Variation 2-54 3.3 Coefficient of Variation 2-54 1. Introduction 3-1 2. Raw Moments 3-1 3. Central Moments 3-3 Methods-1 •1• 490		
2.3 Percentiles 2-36 2.4 Percentile Rank 2-37 2.5 Bax Plot 2-39 3. Measure of Dispersion 2-55 3.1 Quarile Deviation 2-56 3.2 Variance and Standard Deviation 2-58 3.3 Coefficient of Variation 2-54 Moments 15 1. Introduction 3-1 2. Raw Moments (About Origin) 3-1 3. Central Moments 3-3 Mitrical Methods-1 •1• 195	2.1 Quartiles 2-30	
2.4 Percentile Rank 2-37 2.5 Box Plot 2-39 3. Measure of Dispersion 2-55 3.1 Outrile Deviation 2-58 3.3 Coefficient of Variation 2-58 3.3 Coefficient of Variation 2-64 Moments 16 1. Introduction 3-1 2. Raw Moments (About Origin) 3-1 3. Central Moments 3-3 Mittical Methods-1 •1• 195	2.2 00000 200	
3. Measure of Dispersion 2-55 3.1 Quartile Deviation 2-58 3.3 Coefficient of Variation 2-58 3.3 Coefficient of Variation 2-58 1. Introduction 2-64 16 11 16 1. Introduction Chatpande 2. Raw Moments (About Origin) 3-1 3. Central Moments 3-3 3.4 Central Moments 3-3 3.4 Image: State of the state o		
3.1 Quartile Deviation 2-55 3.2 Variance and Standard Deviation 2-58 3.3 Coefficient of Variation 2-64 Moments 15 1. Introduction Clastpande 2. Raw Moments (About Origin)		
3.2 Variance and Standard Deviation 2-58 3.3 Coefficient of Variation 2-64 Moments 16 1. Introduction 3-1 2. Raw Moments (About Origin) 3-1 3. Central Moments 3-3 Mittical Methods-1 •1• 190		2-51
Moments 16 1. Introduction 2. Raw Moments (About Origin) 3. Central Moments 3. Central Moments 3. Settleal Methods-I		
1. Introduction Glastpande	3.3 Coefficient of Variation 2-64	and the second
Raw Moments (About Origin)	Provide and the second s	Contraction of the second s
3. Central Moments		
e je		
The second second		3-3
The second	• i•	1490
- Thur	-	
- Thur		
Same Stranger		
(Carrielland - Thur		
(Charles) and Thim		from.
(2(1-32)))		THE
		- 1 pmm
Max 28 // Plincipal		Principal
	Vidy	G.'s Colloge of Scie anagati, £ No. 44, Par Pune - 411 009

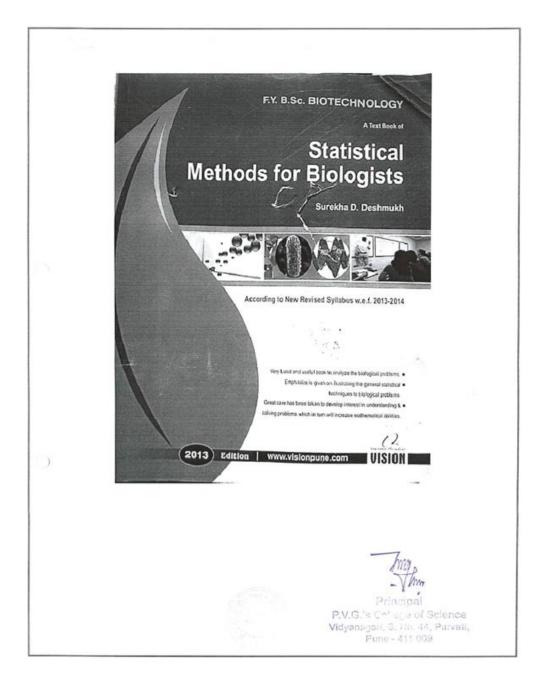
7	
	4 Advances about an Arbitrary Value 'A'
	Advances also at an Arbitrary Value A Belaten between Baw and Contral Momenta A
	 Balatan between Raw and Contractional Activity Proventies of Contral MonionIa
	a champer and Kurtosis
4.	
	R. R
	2. Concept of Symmetric Oranomous, Oranomous, Dealmarkh
	2.2 Prestrictly Skowed Distribution 4-2
	2.3 Negatives 20anost Distributiona 4-2 2.4 Cresical Relationstro among Moan, Median and Modo 4-3
	3. Moasuros of Skowness
	3. Monsulos of coloridas and
	3.2 Bowley's Measure 4.8
	3,3 Kail Poarson's Bi, 3 Coefficientis 4-5 4, Kurtosia
	-4, Kuttosis
	5. Choice of a Measure of Skewness and Kuttosis
	Solver Examples 4-12
5.	Discrete Random Variable
	1. Introduction
	2. Bandom Variable and Discrete Random Vailable
	3. Probability Mass Function or Camulative Probability Function 5.4
	8.1 Distribution Function or Cumulative Probability Function 5-4 3.2 Properties of Distribution Function 5-5
	4. Expectation
	4.1 Expectation of a Function of a Discrete Random Variable 5-13
	4.2 Theorems on Expectation 5-13 5. Variance
6	r o
1	at a station of a
1	
	2.1 Mean and Variance of Uniform Distribution
	3. Bornoulli Distribution
15	Dishinukh
	in a second with the second
	- here
	I may b
	- Vhw
	01920
	Principal
	(S(Parts)a) P.V.G.'s College of Science

	3.2 Additive property of Bernoulli Distribution 6-6	
4.	Binomial Distribution	6-6
	4.2 Additive Property of Binomial Distribution 6-9	and a state of the
1000	4.3 Recurrence Relation for Binomial Probabilities 6-9	States and
	4.4 Fitting of Binomial Distribution 6-10 Solved Examples 6-11	
5.	Geometric Distribution	246
6.	Solved Problems 6-19	A de la completa de la comple
	Poisson Distribution 6.1 Mean and Variance 6-21	6-20
-	6.2 Mode of the Poisson Distribution 6.22	
	6.3 Additive Property of Paisson Distribution 6-23	and the second
	6.4 Poisson Distribution as a Limiting Form of Bnomial Distribution 6-24 6.5 Recurrence Relation fcr Poisson Probabilities 6-25	
	6.6 Fitting of Poisson Distribution 6.26	and the second
7. Co	Solved Problems 6-26	
1.		18
2.	Introduction	7-1 ·
3.	Bivariate Data	
	Correlation 3.1 Positive and Negative Correlation 7-2	7-2
4.	Scatter Diagram Method	7.0
5.	Ran Fearson's Coefficient of Correlation (r)	
	Contraction Coefficient 7-6	
6.		
7.	Coefficient of Determination (r ²)	7-10
	Auto-Correlation upto Lags 2	
1.	gression (For Ungrouped Data)	46
2.	Introduction	8-1
3.	Linear Regression	
	Fitting of Straight Line Using Least Square Method	8-2
	3.2 Line of Regression of X on Y 8-5	
4.	Properties of Regression Coefficients	
Statistical M	lethade -	
	• iii •	The Property States
		7
		a men p
		Vim
	20080 D	rincipal

	5	5.1 Fining of Second Degree Parabola 8-20
		5.2 Fitting of Growth Curve Models 8-23
	6	
9.	. N	Aultiple and Partial Correlation and Regression (For Trivariate Data
	1	
	2	
1	3	Destroyation
1	4	Fitting of Multiple Regression Plane
1		5. Partial Regression Coefficient, Interpretation Solved Examples 9-7
K		5. Multiple Correlation Coefficient
/		7. Partial Correlation Coefficient
1	0	Time Series
		1. Introduction
	:	Meaning and Utility
	3	Components of Time Series
4		Socular Trend (T) 10-3 Soconal Variations (S) 10-3 Soconal Variations (C) 10-4
		3.4 Irregular or Random Variations (I) 10-5 Statemarks
		Additive and Multiplicative Models Ali Additive Model 10-5 Ali Multiplicative Model 10-5
		Methods of Estimating Trend S.1 Moving Average Method 10-6
		5.2 Least Squares Method 10-7
		5.3 Exponential Smoothing Method 10-9 6. Elimination of Trend Union 1 4 101
		7. Simple Time Series Models
		- L Weid
		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
	-	
		a prop p
		- V How
		1000 m
		Principal

P.V.G.'s College of Science, Pune 9 3.3.5 Number of books and chapters in edited volumes/books published and papers in national/international conference proceedings per teacher during the last five years.

Statistical Methods for Biologists by Mrs.Surekha Deshmukh



**3.3.5** Number of books and chapters in edited volumes/books published and papers in national/international conference proceedings per teacher during the last five years.

Statistical Methods for Biologists by Mrs.Surekha Deshmukh

1.       Introduction       30         1.       Introduction       111         2.       Data Condensation and Graphical Methods       1.3         2.1       Attributes and Variables       1.3         2.2       Classification       1.3         2.3       Prequency Distribution       1.5         2.4       Cumulative Prequency Distribution       1.9         2.5       Relative Frequency Distribution       1.10         2.6       Tabulation of Data       1.11         3.       Graphical Representation of Pregoney Distribution       1.12         3.1       Histogram       1.12         3.2       Preguency Distribution       1.10         2.5       Relative Frequency Distribution       1.12         3.1       Histogram       1.12         3.2       Preguency Dayson       1.15         3.3       Frequency Dayson       1.15         3.3       Frequency Clave       1.16         3.4       Ophre or Cumulative Frequency Clave       1.17         4.1       Diagram       1.20         4.2       Sub- chyloidel Bar Diagram       1.20         4.3       Multiple Bar Diagram       1.21         4.4	1.       Introduction to Statistics       30         1.       Introduction       111         2.       Data Condensation and Graphical Methods       1-3         2.1       Attributes and Variables       1-3         2.2       Citastification       1-3         2.3       Prequency Distribution       1-5         2.4       Consultative Frequency Distribution       1-9         2.5       Relative Frequency Distribution       1-10         2.5       Tabulation of Olas       1-11         3.       Graphical Representation of Prequency Distribution       1-12         3.1       Histogram       1-12         3.2       Frequency Polypon       1-15         3.3       Frequency Couve       1-16         3.4       Oplue or Cumulative Frequency Curve       1-17         3.1       Histogram       1-19         3.2       Frequency Polypon       1-17         4.0       Diagrams       1-19         4.1       Simple Bar Diagram       1-19         4.1       Simple Bar Diagram       1-21         4.2       Sub- chicked Bar Diagram       1-22         5.       Stem and Leal chart       1-22         5.	Contents
1.       Introduction       1-1         2.       Data Condensation and Graphical Methods       1-3         2.1       Attributes and Variables       1-3         2.2       Citassification       1-3         2.3       Prequency Distribution       1-5         2.4       Consultative Frequency Distribution       1-9         2.5       Relative Frequency Distribution       1-10         2.6       Tabulation of Data       1-11         3.       Graphical Représentation of Frequency Distribution       1-12         3.1       Histogram       1-12         3.1       Histogram       1-12         3.2       Prequency Polypon       1-15         3.3       Frequency Polypon       1-15         3.3       Frequency Polypon       1-16         3.4       Ogive or Cumulative Frequency Curve       1-17         4.       Diagram       1-19         4.1       Simple Bar Diagram       1-20         4.3       Multiple Bar Diagram       1-21         4.4       Pie Diagram       1-22         5.       Stem and Leal chart       1-25         Population and Sample       06         1.       Population       2-1	1.       Introduction       1-1         2.       Data Condensation and Graphical Methods       1-3         2.1       Attributer and Variables       1-3         2.2       Classification       1-3         2.3       Frequency Distribution       1-5         2.4       Cumulative Frequency Distribution       1-9         2.5       Relative Frequency Distribution       1-10         2.6       Tabulation of Data       1-11         3.       Graphical Representation of Frequency Distribution       1-12         3.1       Histogram       1-12         3.2       Frequency Polypon       1-15         3.3       Frequency Polypon       1-16         3.4       Oplyce or Cumulative Frequency Curve       1-17         4.       Diagrams       1-19         4.1       Simple Bar Diagram       1-20         4.3       Aubiple Bar Diagram       1-21         4.4       Pie Diagram       1-22         5.       Stern and Leal chat       1-25         Population and Sample       06       06         1.       Population and Sample       2-1         1.1       Population       2-1         1.2       Sample <th>Contents</th>	Contents
1.       Introduction       1-1         2.       Data Condentation and Graphical Methods       1-3         2.1       Athibutes and Variables       1-3         2.2       Citization       1-3         2.3       Frequency Distribution       1-5         2.4       Cumulative Frequency Distribution       1-10         2.5       Relative Frequency Distribution       1-10         2.6       Tabulation of Data       1-11         3.       Graphical Representation of Prequency Distribution       1-10         2.5       Frequency Distribution       1-10         2.6       Tabulation of Data       1-11         3.       Graphical Representation of Prequency Distribution       1-12         3.1       Histogram       1-12         3.2       Frequency Polygon       1-15         3.3       Frequency Curve       1-16         3.4       Opilve or Cumulative Frequency Curve       1-17         4.       Diagram       1-20         4.1       Simple Bar Diagram       1-20         4.2       Sub - divided Bar Diagram       1-21         4.4       Pie Diagram       1-22         5.       Stem and Leal chaft       1-25 <t< th=""><th>1.       Introduction       1-1         2.       Data Condensation and Graphical Methods       1-3         2.1       Attributer and Variables       1-3         2.2       Classification       1-3         2.3       Frequency Distribution       1-5         2.4       Cumulative Frequency Distribution       1-9         2.5       Relative Frequency Distribution       1-10         2.6       Tabulation of Data       1-11         3.       Graphical Representation of Frequency Distribution       1-12         3.1       Histogram       1-12         3.2       Frequency Polypon       1-15         3.3       Frequency Polypon       1-16         3.4       Oplyce or Cumulative Frequency Curve       1-17         4.       Diagrams       1-19         4.1       Simple Bar Diagram       1-20         4.3       Aubiple Bar Diagram       1-21         4.4       Pie Diagram       1-22         5.       Stern and Leal chat       1-25         Population and Sample       06       06         1.       Population and Sample       2-1         1.1       Population       2-1         1.2       Sample<th>1. Introduction to Statistics</th></th></t<>	1.       Introduction       1-1         2.       Data Condensation and Graphical Methods       1-3         2.1       Attributer and Variables       1-3         2.2       Classification       1-3         2.3       Frequency Distribution       1-5         2.4       Cumulative Frequency Distribution       1-9         2.5       Relative Frequency Distribution       1-10         2.6       Tabulation of Data       1-11         3.       Graphical Representation of Frequency Distribution       1-12         3.1       Histogram       1-12         3.2       Frequency Polypon       1-15         3.3       Frequency Polypon       1-16         3.4       Oplyce or Cumulative Frequency Curve       1-17         4.       Diagrams       1-19         4.1       Simple Bar Diagram       1-20         4.3       Aubiple Bar Diagram       1-21         4.4       Pie Diagram       1-22         5.       Stern and Leal chat       1-25         Population and Sample       06       06         1.       Population and Sample       2-1         1.1       Population       2-1         1.2       Sample <th>1. Introduction to Statistics</th>	1. Introduction to Statistics
2. Data Condensation and Graphical Methods       1-3         2.1 Attributes and Variables       1-3         2.2 Classification       1-3         2.3 Prequency Distribution       1-5         2.4 Consulative Frequency Distribution       1-9         2.5 Relative Frequency Distribution       1-10         2.6 Tabulation of Data       1-11         3. Graphical Representation of Frequency Distribution       1-12         3.1 Histograw       1-12         3.2 Frequency Dolyno       1-15         3.3 Frequency Dolyno       1-16         3.4 Oplive or Cumulative Frequency Curve       1-16         3.4 Oplive or Cumulative Frequency Curve       1-17         4. Diagrams       1-19         4.1 Simple Bar Diagram       1-21         4.2 Sub - divided Bar Diagram       1-21         4.4 Pie Diagram       1-22         5. Stem and Leal chaft       1-22         5. Stem and Leal chaft       1-23         1.1 Population and Sample       06         1.2 Sample       221         1.2 Sample       221         1.2 Sample       221         1.3 Explored Sampling       2-31	2.       Data Condensation and Graphical Methods       1-3         2.1       Attributes and Variables       1-3         2.2       Classification       1-3         2.3       Prequency Distribution       1-5         2.4       Cumulative Prequency Distribution       1-9         2.5       Relative Prequency Distribution       1-10         2.6       Tabulation of Data       1-11         3.       Graphical Representation of Prequency Distribution       1-12         3.1       Histogram       1-12         3.2       Prequency Polypon       1-15         3.3       Frequency Curve       1-16         3.4       Ogive or Cumulative Frequency Curve       1-17         4.       Diagrams       1-19         4.1       Simple Bar Diagram       1-19         4.1       Simple Bar Diagram       1-20         4.3       Multiple Bar Diagram       1-21         4.4       Pie Diagram       1-22         5       Stern and Leal chart       1-25         Population and Sample       06       1         1.1       Population and Sample       2-1         1.2       Sample       2-2         2       Types and	1. Introduction
Addicates and Variables     1-3     22     Citizabilication     1-3     23     Frequency Distribution     1-5     24     Computative Frequency Distribution     1-10     25     Falsative Frequency Distribution     1-10     26     Tabulation of Data     1-11     Graphical Representation of Frequency Distribution     1-12     3.1     Histogram     1-12     3.2     Frequency Polypon     1-15     3.3     Frequency During     1-15     3.3     Frequency During     1-16     3.4     Oglve or Cumulative Frequency Curve     1-17     Diagrams     1-19     4.1     Simple Bar Diagram     1-20     4.3     Multiple Bar Diagram     1-21     4.4     Pie Diagram     1-22     S.     Sitem and Leaf chat     1-22     S.     Sitem and Leaf chat     1-2     1.1     Population     2-1     1     1     Pie     Pie	Ambulation       1-3         22       Glassification       1-3         23       Prequency Distribution       1-3         24       Cumulative Prequency Distribution       1-9         25       Relative Prequency Distribution       1-10         26       Tabulation of Data       1-11         3.       Graphical Representation of Prequency Distribution       1-12         3.1       Histogram       1-12         3.2       Prequency Polypon       1-15         3.3       Frequency Polypon       1-16         3.4       Opixe or Cumulative Frequency Curve       1-17         4.       Diagram       1-19         4.1       Simple Bar Diagram       1-19         4.2       Sub - divided Bar Diagram       1-20         4.3       Multiple Bar Diagram       1-21         4.4       Pie Diagram       1-22         5.       Stam and Leal chart       1-25         Population and Sample       06       1.         1.1       Population       2-1         1.2       Sample       2-2         2.       Types and Mathods of Sampling       2-3         3.       Limitations of Sampling       2-5	
22       Classification       1-3         23       Frequency Distribution       1-5         24       Cumulative Frequency Distribution       1-10         25       Relative Frequency Distribution       1-10         26       Tabulation of Data       1-11         3.       Graphical Representation of Frequency Distribution       1-10         21       Histogram       1-12         3.1       Histogram       1-12         3.2       Frequency Polypon       1-15         3.3       Frequency Curve       1-16         3.4       Ogive or Cumulative Frequency Curve       1-17         4.       Diagrams       1-19         4.1       Simple Bar Diagram       1-20         4.3       Multiple Bar Diagram       1-21         4.4       Pie Diagram       1-22         5.       Stem and Leal chart       1-25         Population and Sample       06         1.       Population       2-1         1.1       Population       2-1         1.2       Sample       2-2         1.11       Population       2-1         1.2       Sample       2-2         1.1       Population <td>22       Classification       1-3         23       Prequency Distribution       1-5         24       Cursulative Frequency Distribution       1-9         25       Relative Frequency Distribution       1-10         26       Tabulation of Data       1-11         3.       Graphical Representation of Frequency Distribution       1-12         3.1       Histogram       1-12         3.2       Frequency Dougon 1-15       1-17         3.3       Frequency Curve       1-16         3.4       Optive or Cursulative Frequency Curve       1-17         4.       Diagrams       1-19         4.1       Simple Bar Diagram       1-20         4.3       Autiple Bar Diagram       1-21         4.4       Pie Diagram       1-22         5.       Stem and Leal chaft       1-25         Population and Sample       06       06         1.       Population       2-1         1.2       Sample       2-1         1.2       Sample       2-2         2.       Types and Mathods of Sampling       2-3         3.       Limitations of Sampling       2-5    </td> <td>2.1 Attributes and Variables 1-3</td>	22       Classification       1-3         23       Prequency Distribution       1-5         24       Cursulative Frequency Distribution       1-9         25       Relative Frequency Distribution       1-10         26       Tabulation of Data       1-11         3.       Graphical Representation of Frequency Distribution       1-12         3.1       Histogram       1-12         3.2       Frequency Dougon 1-15       1-17         3.3       Frequency Curve       1-16         3.4       Optive or Cursulative Frequency Curve       1-17         4.       Diagrams       1-19         4.1       Simple Bar Diagram       1-20         4.3       Autiple Bar Diagram       1-21         4.4       Pie Diagram       1-22         5.       Stem and Leal chaft       1-25         Population and Sample       06       06         1.       Population       2-1         1.2       Sample       2-1         1.2       Sample       2-2         2.       Types and Mathods of Sampling       2-3         3.       Limitations of Sampling       2-5	2.1 Attributes and Variables 1-3
2.4       Curnulative Frequency Distribution       1-9         2.5       Felative Frequency Distribution       1-10         2.6       Tabulation of Data       1-11         3.       Graphical Representation of Frequency Distribution       1-12         3.1       Histogram       1-12         3.2       Frequency Polypon       1-15         3.3       Frequency Curve       1-16         3.4       Oglve or Currulative Frequency Curve       1-17         4.       Diagrams       1-19         4.1       Simple Bar Diagram       1-20         4.2       Sub - divided Bar Diagram       1-20         4.3       Multiple Bar Diagram       1-21         4.4       Pie Diagram       1-22         5.       Stem and Leal chat       1-25         Population and Sample       06         1.       Population       2-1         1.1       Population       2-1         1.2       Sample       2-2	24       Curvulative Frequency Distribution       1-9         25       Relative Frequency Distribution       1-10         26       Tabulation of Data       1-11         3.       Graphical Representation of Frequency Distribution       1-12         3.1       Histogram       1-12         3.2       Frequency Polypon       1-15         3.3       Frequency Curve       1-16         3.4       Ogive or Curvulative Frequency Curva       1-17         4.       Diagrams       1-19         4.1       Simple Bar Diagram       1-20         4.3       Multiple Bar Diagram       1-21         4.4       Pie Diagram       1-22         5.       Stem and Leal chart       1-22         5.       Stem and Sample       06         1.       Population and Sample       2-1         1.1       Population       2-1         1.2       Sample       2-2         2.       Types and Mathods of Sampling       2-3         3.       Limitations of Sampling       2-5	2.2 Glassification 1-3
2.5 Relative Frequency Distribution 1-9 2.6 Tabulation of Data 1-11 3. Graphical Representation of Prequency Distribution	2.5       Relative Programs Distribution       1-10         2.6       Tabbalaion of Data       1-11         3.       Graphical Representation of Programs Distribution       1-12         3.1       Histogram       1-12         3.2       Prequency Polypon       1-15         3.3       Frequency Polypon       1-15         3.4       Ogive or Cumulative Frequency Curve       1-17         4.       Diagrams       1-19         4.1       Simple Bar Diagram       1-19         4.1       Simple Bar Diagram       1-20         4.3       Multiple Bar Diagram       1-21         4.4       Pie Diagram       1-22         5.       Stem and Leal chart       1-25         Population and Sample       06       2-1         1.1       Population       2-1         1.2       Sample       2-2         2.       Types and Mathods of Sampling       2-3         3.       Limitations of Sampling       2-5	1.5
2.6       Tabulation of Data       1.11         3.       Graphical Representation of Frequency Distribution       1-12         3.1       Histogram       1-12         3.2       Frequency Polygon       1-15         3.3       Frequency Curve       1-16         3.4       Ogive or Cumulative Frequency Curve       1-17         4.       Diagrams       1-19         4.1       Simple Bar Diagram       1-19         4.2       Sub - divided Bar Diagram       1-20         4.3       Multiple Bar Diagram       1-21         4.4       Pie Diagram       1-22         5.       Stem and Leal chart       1-25         Population and Sample       06         1.       Population       2-1         1.1       Population       2-1         1.2       Sample       2-2	2.6       Tabulation of Data       1.11         3.       Graphical Representation of Frequency Distribution       1-12         3.1       Histogram       1-12         3.2       Frequency Polygon       1-15         3.3       Frequency Curve       1-16         3.4       Opive or Cumulative Frequency Curve       1-17         4.       Diagrams       1-19         4.1       Simple Bar Diagram       1-19         4.2       Sub - divided Bar Diagram       1-30         4.3       Multiple Bar Diagram       1-21         4.4       Pie Diagram       1-22         5.       Stem and Leal chart       1-25         Population and Sample       06       1.         1.       Population       2-1         1.2       Sample       2-2         2.       Types and Mathocks of Sampling       2-3         3.       Limitations of Sampling       2-5	1-9
3.       Graphical Representation of Frequency Distribution       1-12         3.1       Histogram       1-12         3.2       Frequency Polypon       1-15         3.3       Frequency Curve       1-16         3.4       Ogive or Cumulative Frequency Curve       1-17         4.       Diagrams       1-19         4.1       Simple Bar Diagram       1-19         4.2       Sub - divided Bar Diagram       1-20         4.3       Multiple Bar Diagram       1-21         4.4       Pio Diagram       1-22         5.       Stem and Leal chart       1-25         Population and Sample       06         1.       Population       2-1         1.1       Population       2-1         1.2       Sample       2-2         2.4       Leaboric of Sampling       2-3	3. Graphical Representation of Frequency Distribution       1-12         3.1 Histogram       1-12         3.2 Frequency Polygon       1-15         3.3 Frequency Curve       1-16         3.4 Ogive or Cumulative Frequency Curve       1-17         4. Diagrams       1-19         4.1 Simple Bar Diagram       1-19         4.2 Sub - divided Bar Diagram       1-20         4.3 Multiple Bar Diagram       1-21         4.4 Pie Diagram       1-22         5. Stem and Leaf chat       1-25         Population and Sample       06         1. Population and Sample       06         1. Population       2-1         1.2 Sample       2-2         2. Types and Mathods of Sampling       2-3         3. Limitations of Sampling       2-5	2.5 Relative Frequency Distribution 1-10
3.1       Histogram       1-12         3.2       Frequency Polygon       1-15         3.3       Frequency Curve       1-16         3.4       Opive or Cumulative Frequency Curve       1-17         4.       Diagrams       1-19         4.1       Simple Bar Diagram       1-19         4.2       Sub - divided Bar Diagram       1-20         4.3       Multiple Bar Diagram       1-21         4.4       Pio Diagram       1-22         5.       Stem and Leal chart       1-25         Population and Sample       06         1.       Population and Sample       06         1.1       Population       2-1         1.2       Sample       2-1         1.2       Sample       2-2	3.1       Histopram       1-12         3.2       Frequency Polygon       1-15         3.3       Frequency Curve       1-16         3.4       Ogive or Cumulative Frequency Curve       1-17         4.       Diagrams       1-19         4.1       Simple Bar Diagram       1-19         4.2       Sub - divided Bar Diagram       1-30         4.3       Multiple Bar Diagram       1-21         4.4       Pie Diagram       1-22         5.       Sitem and Leal chart       1-25         Population and Sample       06         1.       Population       2-1         1.1       Population       2-1         1.2       Sample       2-2         2.       Types and Mathods of Sampling       2-3         3.       Limitations of Sampling       2-5	
3.2       Frequency Polygon       1-15         3.3       Frequency Curve       1-16         3.4       Ogive or Cumulative Frequency Curve       1-17         4.       Diagrams       1-19         4.1       Simple Bar Diagram       1-19         4.2       Sub - divided Bar Diagram       1-20         4.3       Multiple Bar Diagram       1-21         4.4       Pie Diagram       1-22         5.       Stem and Leal chart       1-22         5.       Stem and Leal chart       1-22         1.       Population and Sample       06         1.       Population       2-1         1.1       Population       2-1         1.2       Sample       2-2	3.2       Frequency Polygon       1-15         3.3       Frequency Curve       1-16         3.4       Oglve or Cumulative Frequency Curve       1-17         4.       Diagrams       1-19         4.1       Simple Bar Diagram       1-19         4.2       Sub - divided Bar Diagram       1-20         4.3       Multiple Bar Diagram       1-21         4.4       Pie Diagram       1-22         5.       Stem and Leal chart       1-25         Population and Sample       06       1.         1.       Population       2-1         1.1       Population       2-1         1.2       Sample       2-2         2.       Types and Mathods of Sampling       2-3         3.       Limitations of Sampling       2-5	
3.3       Frequency Curve       1-16         3.4       Ogive or Cumulative Frequency Curve       1-17         4.       Diagrams       1-19         4.1       Simple Bar Diagram       1-19         4.2       Sub - divided Bar Diagram       1-20         4.3       Multiple Bar Diagram       1-21         4.4       Pie Diagram       1-22         5.       Stem and Leal chart       1-22         5.       Stem and Sample       06         1.       Population and Sample       2-1         1.1       Population       2-1         1.2       Sample       2-2	3.3       Frequency Curve       1-16         3.4       Oglve or Cumulative Frequency Curve       1-17         4.       Diagrams       1-19         4.1       Simple Bar Diagram       1-19         4.2       Sub - divided Bar Diagram       1-20         4.3       Multiple Bar Diagram       1-21         4.4       Pie Diagram       1-22         5.       Stem and Leal chart       1-25         Population and Sample       06         1.       Population       2-1         1.1       Population       2-1         1.2       Sample       2-2         2.       Types and Methods of Sampling       2-3         3.       Limitations of Sampling       2-5	
3.4       Opive or Cumulative Frequency Curve       1-17         4.       Diagrams       1-19         4.1       Simple Bar Diagram       1-19         4.2       Sub - divided Bar Diagram       1-20         4.3       Multiple Bar Diagram       1-21         4.4       Pie Diagram       1-22         5.       Stem and Leal chart       1-25         Population and Sample       06         1.       Population       2-1         1.1       Population       2-1         1.2       Sample       2-1         1.2       Sample       2-1         1.2       Sample       2-1         1.3       Population       2-1         1.4       Sample       2-1         1.5       Sample       2-1         1.6       Sample       2-1         1.7       Sample       2-1         1.8       Sample       2-1         1.9       Sample       2-1         1.1       Sample       2-1         1.2       Sample       2-2	3.4       Ogive or Cumulative Frequency Curve       1-17         4.       Diagrams       1-19         4.1       Simple Bar Diagram       1-19         4.2       Sub - divided Bar Diagram       1-20         4.3       Multiple Bar Diagram       1-21         4.4       Pie Diagram       1-22         5.       Stem and Leal chart       1-25         Population and Sample       06         1.       Population       2-1         1.1       Population       2-1         1.2       Sample       2-2         2.       Types and Methods of Sampling       2-3         3.       Limitations of Sampling       2-5	
4.       Diagrams       1-19         4.1       Simple Bar Diagram       1-19         4.2       Sub - divided Bar Diagram       1-20         4.3       Multiple Bar Diagram       1-21         4.4       Pie Diagram       1-22         5.       Stem and Leal chart       1-22         5.       Stem and Sample       06         1.       Population and Sample       2-1         1.1       Population       2-1         1.2       Sample       2-2	4. Diagrams       1-19         4.1 Simple Bar Diagram       1-19         4.2 Sub - divided Bar Diagram       1-20         4.3 Multiple Bar Diagram       1-21         4.4 Pie Diagram       1-22         5. Stem and Leal chart       1-22         5. Stem and Leal chart       1-25         Population and Sample       06         1. Population and Sample       2-1         1.1 Population       2-1         1.2 Sample       2-2         2. Types and Mathods of Sampling       2-3         3. Limitations of Sampling       2-5	
4.1       Simple Bar Diagram       1-19         4.2       Sub - divided Bar Diagram       1-20         4.3       Multiple Bar Diagram       1-21         4.4       Pie Diagram       1-22         5.       Stem and Leal chart       1-25         Population and Sample       06         1.       Population 2-1         1.2       Sample       2-1         1.2       Sample       2-3	4.1       Simple Bar Diagram       1-19         4.2       Sub - divided Bar Diagram       1-20         4.3       Multiple Bar Diagram       1-21         4.4       Pie Diagram       1-22         5.       Stem and Leal chart       1-25         Population and Sample       06         1.       Population       2-1         1.1       Population       2-1         1.2       Sample       2-2         2.       Types and Mathods of Sampling       2-3         3.       Limitations of Sampling       2-5	
4.2       Sub - divided Bar Diagram       1-20         4.3       Multiple Bar Diagram       1-21         4.4       Pie Diagram       1-22         5.       Stem and Leal chart       1-25         Population and Sample       06         1.       Population and Sample       2-1         1.1       Population       2-1         1.2       Sample       2-2	4.2       Sub - divided Bar Diagram       1-20         4.3       Multiple Bar Diagram       1-21         4.4       Pie Diagram       1-22         5.       Stem and Leal chart       1-25         Population and Sample       06         1.       Population and Sample       2-1         1.1       Population       2-1         1.2       Sample       2-3         2.       Types and Mathods of Sampling       2-3         3.       Limitations of Sampling       2-5	그리는 이상 구요가 많은 것 같은 것 같은 것 같은 것 같은 것 같이 많이 많이 많이 다 가지 않는 것 같이 많이 다 가지 않는 것 같이 많이 가지 않는 것 같이 많이 많이 많이 많이 많이 많이 많이 했다.
4.3 Multiple Bar Diagram 1-21 4.4 Pie Diagram 1-22 5. Stem and Leal chart	4.3       Multiple Bar Diagram       1-21         4.4       Pie Diagram       1-22         5.       Stem and Leal chart       1-25         Population and Sample       06         1.       Population and Sample       2-1         1.1       Population       2-1         1.2       Sample       2-2         2.       Types and Methods of Sampling       2-3         3.       Limitations of Sampling       2-5	
4.4       Pie Diagram       1-22         5.       Stem and Leal chart       1-25         Population and Sample       06         1.       Population and Sample       2-1         1.1       Population       2-1         1.2       Sample       2-2	4.4       Pie Diagram       1-22         5.       Stem and Leal chart       1-25         Population and Sample       06         1.       Population and Sample       2-1         1.1       Population       2-1         1.2       Sample       2-2         2.       Types and Methods of Sampling       2-3         3.       Limitations of Sampling       2-5	
5. Stem and Leaf chart	5. Stem and Leal chart	
Population and Sample 06 1. Population and Sample	Population and Sample     06       1.     Population and Sample     2.1       1.1     Population     2.1       1.2     Sample     2.2       2.     Types and Mathods of Sampling     2.3       3.     Limitations of Sampling     2.5	4.4 10000
Population and Sample	Population and Sample	The second state of the second state of the second state stat state state s
1.1 Population 2-1 1.2 Sample 2-2 Attribute of Sampling	1.1       Paputation       2-1         1.2       Sample       2-2         2.       Types and Methods of Sampling       2-3         3.       Limitations of Sampling       2-5	Population and Sample 06
1.2 Sample 2-2 	1.2     Sample     2-2       2.     Types and Methods of Sampling     2-3       3.     Limitations of Sampling     2-5	
1.2 Sample at Learning	1.2 Sample     2.3     Types and Methods of Sampling	1.1 Population 2-1
2-3	Types and Methods of Sampling	1.2 Sample 2-2
2. I you - 2-5	3. Limitations of Sampling	2-3
		- Lastance of Sampling
3. Limitation of the first	atistical Methods for Biologists +1 + [1504	3. Limitation of the second
- 01-legists +1+ 1504	stistical Methods for Badoyand	et e
stistical Methods for Brock and		atistical Methods for Brood and
		Tim
Fring Prom		Principal
Thin	Tim	P.V.G.'s Cellene of Science
Principal P.V.G.'s Cettone of Scien	- Vinn	

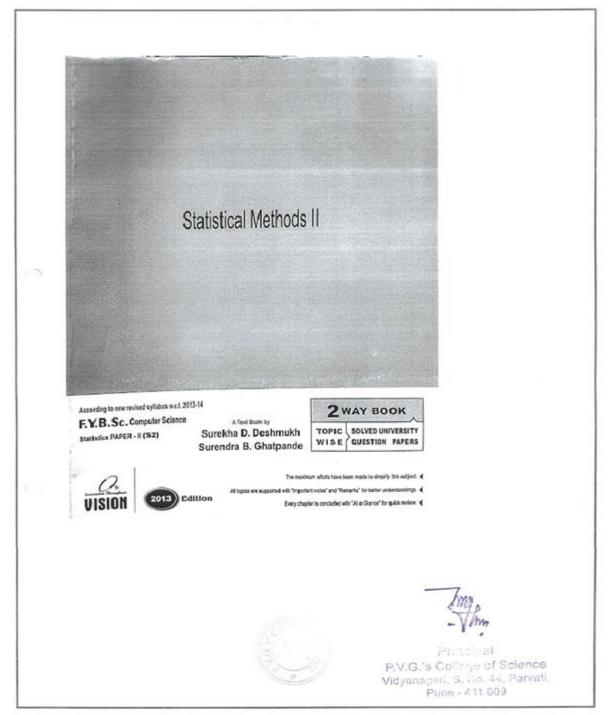
3. Descriptive Statistics
Measures of Central Tendency      Dependence of a Grant American State      Dependence of the Grant Ameri
1.1 Objectives and Requisites of a Good Average 2-1
1.3 Median 3.11
1.4 Bax plat 3.18 6.
1.5 Mode 3-20 Inte
7.6 Partition Values 3-25 1.
. 4.7 Appropriate Choice of an Average 3-27 2.
<ol> <li>Measures of Dispersioni a.</li> </ol>
2.1 Requisites for an Ideal Measure of Dispersion 3-33 4.
2.2 Absolute and Relative Measures of Dispersion 3-33 5
2.3 Variance and Standard Deviation 3-33 e 3. Skewmetz
2 Vietnin
4. Probability
1. Introduction
2. Classical Probability
3. Axiomatic Approach to Probability
4. Conditional Probability
5. Independence of Two Events
5. Standard Probability Distributions
1, Introduction
2. Random Variable
3. Discrete Random Variable
3.1 Probability Distribution 5-2
3.3 Expectation 5.5
3.4 Variance 5-6
4. Continuous Random Variable
Contraction of the second seco
hno.
- Y Pin
Principal
P.V.G.'s Collected of Science

Central Linit Theorem	
Tests of Hypothesis	
Tests of Hypothesis	
Sampling Distribution of a Statistic	6-4 
Sampling Distribution of a Statistic Standard Error (S.E.) Types of Errors tiling Of Hypothesis Introduction Procedure for Testing of Hypothesis Tests for Mean	
Tests for Mean	
Tests for Mean	
Introduction	24 7.1 7.1
Procedure for Testing of Hypothesis	
Procedure for Testing of Hypothesis	
Tests for Mean	
	7.2
3.2 Test for Equality of Two Means 7.3	
3.3 Paired T - Test for Difference of Means 7-4	
Tests for Variance	
4.1 Test for Specified Variance (for One Population) 2.10	
4.2 Test for Equality of Two Variances 7-12	
Tests Based on Chi-Square Distribution	
5.2 Tests for Independence of Attributes 7-16	
	12
Two-Way Classification	
	62.54
Methods for Biologists - 3 -	1504
	4.7 Test for Specified Variance (for One Population) 2.10     4.2 Test for Equality of Two Variances 7-12     Tests Based on Chi-Square Distribution

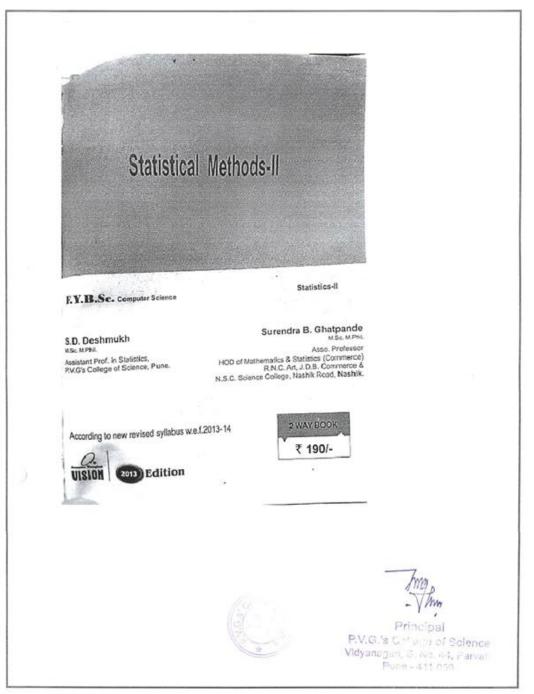
Correlation 1. Introduction ... 2. Bivariate Data..... 3. Correlation 4. Methods of Studying Correlation ...... 4.1 Scatter Diagram Method 9-3 4.2 Covariance 9.5 9.7 4.3 Karl Pearson's Coefficient of Corrolation 5. Multiple Correlation 6. Partial Correlation Coefficient .... *** Tin Principal P.V.G.'s Collage of Science Vidyanepad, S. No. 44, Parvati, Pune - 411 009

3.3.5 Number of books and chapters in edited volumes/books published and papers in national/international conference proceedings per teacher during the last five years.

Statistical Methods-II by Mrs.Surekha Deshmukh

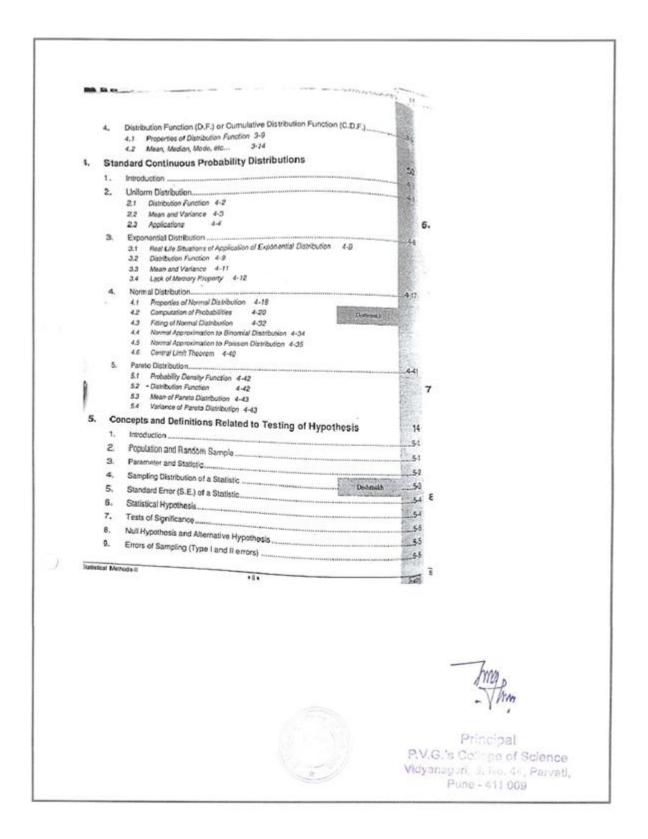


3.3.5 Number of books and chapters in edited volumes/books published and papers in national/international conference proceedings per teacher during the last five years.



### Statistical Methods-II by Mrs.Surekha Deshmukh

1. D	Contents	Frank
1.	1.1 Fundamental Principle of Counting 1-2 1.2 Permutations 1-3 1.3 Combinations 1-5	
	1.5 Statement of Binomial Theorem 1-7	
2		50.762
4.		
	4.1 Types of Events 1-14	Server 1
	4.2 Operations on Events 1-16 Probability	
5.	5.1 Classical Definition of Probability 1-21	
	5.2 Relative Frequency Approach to Probability 1-27	
	5.3 Probability Models 1-28 5.4 Axiomatic Approach to Probability 1-30	
6		ât
2. A		20
1	Conditional Probability	2.1
2		2.5
3	Definition of Sensitivity of a Procedure, Specificity of Procedure	LOUDAN AND A LOUP
	an opposition of the second seco	
1	<ol> <li>Independence of Two Events</li></ol>	2-12
	12	
3. 0	Continuous Random Variable	24
		31
	Calati	.33
	second of the second seco	
_		
Statutica	al Methods II	(Fight
	0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000	A COLORED TO A COL
		the second s
		28.1
		ting .
		n n m D

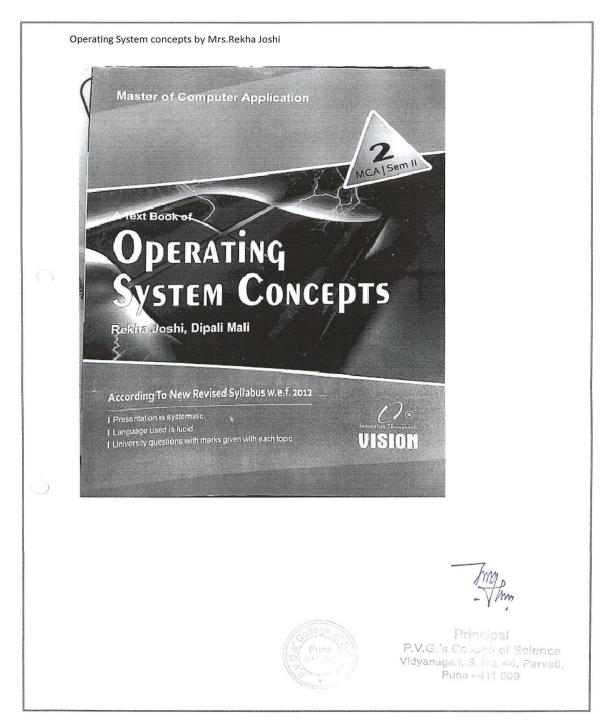


	0. Critical Region	
1	0. Critical Region 1. Level of Significance (I_O.S.) 2. One Stretz	5-6
1	One Sided and Two Sided Tests      Procedure for Tests	1.7 · · · ·
13	Procedure for Testing of Hypothesis     Provide P	5-0
14	<ol> <li>P-value (Descriptive Level)</li> </ol>	
6. L	arge Sample Tests	and the second second
1.	Introduction	22
2,	2.1 Two-sided Test 6.9	
3.	erre-soop (618 9-3	
1	3.1 Two-sided Test 6-4	
	3.2 One-sided Tests 6-5 DestroyAtt	
4.	Tests for Single Proportion	
	4.1 Two-sided Test 6-6 4.2 One-sided Tests 6-7	particular and the second s
5.	and add least by	A CASE OF A CASE
	5.1 Two-sided Test 6-7 5.2 One-sided Tests 6-8	
7. T	ests Based on t-Distribution	24
1.	Introduction	
2	t - test for Single Mean	7.2
3.	t-test for Equality of Two Population Means	7.4
4.		7.5
5.	Test of Significance of Correlation Coefficient for Bivariate Raw Data	7-14
6.	Test el Significance of Regression Coefficients for Bivariate Data	
B. T	ests Based on Chi-Square Distribution	18
1.		8.1
2	Total Condense of Et	
3.	Chi-Square Test for Independence of Attributes	
4.	Test tor significance of variable to openation and the second sec	
Indistical	Methods-8 • II •	1 [140]
		huna
		a map
		- Vinn
		Principal
		Principal

5. Non-Parametric Tests t. https.don_____ -----2. Em Tat. 3 StorTest 4 Kompos-Sningy Fist 8 Nur-Villing, Tist 10. Simulation 1 hinduter 2 Sinuation 21 Hersen Somerafireen 102 22 Adde of Smither 183 3 Fandor Nurresi Generalion 4 Testing Requirements of a Good Fendlom Namber Generator Using 41 for Test to Tacky Randomasia 184 4.8 Son Territor Realing Springery of the Scouple 1.6.6 barne. 47 Generation 186 5. Vedel Sampling from Uniform and Expensive Destributions to a characteristic ray 52 Statesta Developer roltz 6. Ubdel Skingling ham Korma Gistaburian using Box-Mullar ..... É., Principal P.V.G.'s Collence of Science Vidyanagun, S. No. 44, Parvali,

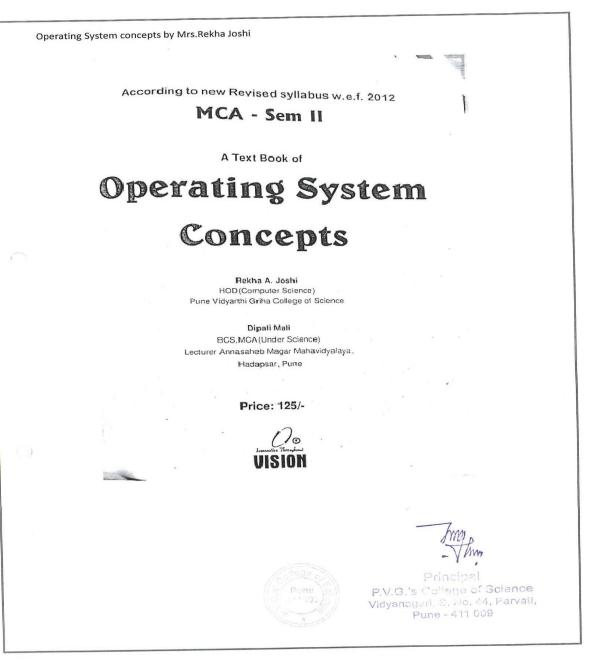
3.3.5 Number of books and chapters in edited volumes/books published and papers in national/international conference proceedings per teacher during the last five years.

### Operating System Concepts by Mrs.Rekha Joshi



3.3.5 Number of books and chapters in edited volumes/books published and papers in national/international conference proceedings per teacher during the last five years.

#### **Operating System Concepts by Mrs.Rekha Joshi**



-		
	Contents	
	reduction	
1. Intr	Introduction.	14
	1.1 Features of an Onocating P	
2		
2.	View of Operating System 1-4 2.1 Logical View 1-4	
	2.2 User View Versus System View	~
з.	System Calls	
4. 5.	System Programs	1-5
5.	Operating System Structure	1-8
	5.2 Layered Structure 1-10	
	5.3 Microkernel Structure 1-11 5.4 Monolithic Structure 1-11	1
6.	5.4 Manalithic Structure 1-11 Concept of Virtual Machine	1
	ocess Management	
1.	Process Concept	16
2.	ribbeas control Block	
3.	Process Scheduling	
4.	Process Operations	
	4.1 Process Creation 2-5 4.2 Process Termination 2-6	
5.	Interprocess Communication	
	5.1 Race Conditions 2-7	2-7
	5.2 Critical Regions - 2.7	
	5.3 Mutual Exclusion with Busy Walting: 2-8 5.4 Sleep and Wakeup 2-9	and the second
	5.5 Semaphores 2-9	
	5.6 Mulexes 2-10	
	5.7 Monitors 2-10 5.8 Message Passing 2-11	
	5.8 Message Passing 2-11 5.9 Barriers 2-12	
6.	Communication in Client-Server	
	6.1 Sockets 2-12	2.12
	6.2 Remote Procedure Calls 2-12	
7.	6.3 Remote Method Invacation 2.12	
	ricos (Real Time Operating System)	
Operatin	9 System Concepts •1•	1447
and the second	•1•	(1447)
and the second se		

	1		and an and a second	
		3.	CPU Scheduling	
			I. Introduction     Scheduling Concept	
			3 CPINONE OPT	
			<ul> <li>Sorreguing Criteria</li> </ul>	
			5. Schaduling Algorithms.	
			8. Scheduling Evaluation	
			6.1 Quouing Models 3-12	
			7. Simulation	
		4.	Process Synchronization and Deadlock	
			1. Synchronization Concent	
			- One can be down Propriation	
			N. Deadlock Concepts	
			<ul> <li>Desclock Prevention and Avoidance</li> </ul>	
			5.1- Sale State 4-10	
		1.00	5.2 Resource – Allocation Graph Algorithm 4-10 5.3 Banker's Algorithm 4-11	
			6. Deadlock Detection	
		19	7. Deadlock Recovery	
		5.	mentory management	
			1. Concept	
			Management Techniques     Contiguous and Non-contiguous Allocation	
			Logical and Physical Address	
			5. Conversion of Logical to Physical Address	
			6. Paging	
			7. Segment with Plaging.	
			8. Virtual Memory Concept	
			9. Demand Paging	
			9.1 Page Fault 5-18	
			10. Page Replacement Algorithms	
			11. Allocation of Frames	
	1.1		12. Thrashing	
)				
			mon p	
			The	
			- Yring	
			Principal	
			(() (A THOSE)), P.V.G.'s College of Science	:0
			Vidyanagari, S. No. 44, Parva	iti
			Vidyanagari, S. Ho. 44, Palva	4112

3.3.5 Number of books and chapters in edited volumes/books published and papers in national/international conference proceedings per teacher during the last five years.

	ating System concepts by Mrs.Rekha Joshi	
	6. Inroduction	20
	1. Introduction	
	3.1 Types of Accesses 6-3	
	3.2 Access Control 6-3 3.3 Other Approaches 6-4	
	4. File System Implementation	.6-4
	5. Directory Structure.	
	<ol> <li>Free Space Management</li> </ol>	
	7. Allocation Methods	
	g Efficiency and Performance	
	8.2 Performance 6-15	
	9. Recovery	
	10. NFS and NTFS	
	11. SAMBA Concept	
	7. Disk Management	20
	1. Disk Structure	
	2. Disk Scheduling Algorithm	
	2.1 FCFS Scheduling 7-2	
	2.2 SSTF Scheduling 7-3	
	2.3 SCAN Scheduling 7-4 2.4 C-SCAN Scheduling 7-4	
	2.5 LOOK Scheduling 7-5	
	2.6 Selection of a Disk Scheduling Algorithm 7-6	
	3. Disk Management	
	3.1 Disk Formatting 7-6	
	3.2 Boot Block 7-7	
	3.3 Bad Blocks 7-7	
	<ol><li>Swap Space Concept and Management</li></ol>	
	4.1 Swap-Space Use 7-8	
	4.2 Swap-Space Location 7-8 4.3 Swap-Space Management 7-9	
	4.3 Swap-Space Management 7-9 5. RAID Structure	7-9
	6. Disk Porformance Issues	
	-sect unoimance issues	
)	Operating System Concepte 2.2	[1447]
	a system Concepte	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
		<i>z</i> '
		han
		110p
		- Mm
		1.
		Principal
	G Pute P.	
		P.V.G.'s College of Science
		Viduonocari S Nic 44 Parvall
		Vidyanagari, S. No. 44, Parvati, Pune - 411 009

942.

Operati	ng System concepts by Mrs.Rekha Joshi
	B. Distributed Operating System     I. Introduction     Centralized Versus Distributed Processing     Advantages of Distributed OS     Types of Distributed OS     Concept of Global OS (QOS)     NOS Architecture
	<ol> <li>NOS Architecture.</li> <li>Case Study of Windows OS and Non-Windows OS</li> <li>An Introduction To Modern Mobile Operating Systems 9.2         <ol> <li>An Introduction To Modern Mobile Operating Systems 9.2</li> <li>Third Party Proprietary Operating Systems 9.2</li> <li>Third Party Proprietary Operating Systems 9.2</li> <li>Free &amp; Open Source Operating Systems 9.2</li> <li>Stree &amp; Open Source Operating Systems 9.5</li> </ol> </li> <li>Which Smartphone OS is the besi?</li> <li>Case Study.</li> <li>MinDows 9.8</li> <li>WINDOWS 1 9-10</li> <li>WINDOWS 2 9-11</li> <li>WINDOWS 3 9-12</li> <li>WINDOWS 95 9-14</li> <li>G WINDOWS 98 9-17</li> <li>WINDOWS 98 9-17</li> <li>WINDOWS 98 9-17</li> <li>WINDOWS 98 9-17</li> <li>WINDOWS 98 9-18</li> <li>WINDOWS 97 9-20</li> <li>MINDOWS 97 9-23</li> <li>UNNDOWS 97 9-24</li> <li>The Operating Systems 9-31</li> <li>WINDOWS 1 9-261</li> <li>MON_WINDOW 0.5</li> <li>MON_WINDOW 0.5</li> <li>MON_WINDOW 0.5</li> <li>Midoni: a non-windows OS in the works, not just experimental 9-32</li> </ol>
0	
	Pune 0 Pune 0 Pune 0 Pune 0 Pune 0 Principal P.V.G.'s College of Science Vidyanagari, S. No. 44, Parvati, Pune - 411 009