Dempo Charities Trust's
DHEMPE COLLEGE OF ARTS & SCIENCE
Miramar, Panaji-Goa

Statistics and Statistical surveys using statisticalpackage R or similar software

CourseObjective:

Introduction to various statistical concepts and Introduction to Ror similar statistical software

CourseContents: Paper I and paper II

PAPER I DESCRIPTIVE STATISTICS
Types of Data: Concepts of a statistical population and sample from a population;
Qualitative and quantitative data; nominal and ordinal data; cross sectional and time series
data; discrete and continuous data; frequency and non- frequency data. Different types
of scales - nominal, ordinal, ratio and interval.

Collection and Scrutiny of Data:
•   Primary data - designing a questionnaire and a schedule; checking their consistency.
•   Secondary data - its major sources including some government publications.
Complete enumeration, controlled experiments, observational studies
and sample surveys. Scrutiny of data for internal consistency and detection of errors of
recording. Ideas of cross-validation. .

Presentation of Data: Construction of tables with one or more factors of classification.
Diagrammatic and graphical representationof grouped data. Frequency distributions,
cumulative frequency distributions and their graphical representation, histogram, frequency
polygon and ogives. Stem and leaf chart. Box plot.
Analysis of Quantitative Data: Univariate data-Concepts of central tendency or location,
dispersion and relative dispersion, skewness and kurtosis, and their measures including
those based on quantiles and moments.

Bivariate Data: Scatter diagram. Product moment correlation coefficient and its
properties. Coefficient of determination.Correlationratio.Concepts of error in regression.
Principle of least squares.Fitting of linear regression and related results. Fitting of curves
reducible to polynomials by transformation. Rank correlation .

Multivariate data: Multiple regression, multiple correlation and partial correlation in three
variables. Their measures and related results.

PAPER II
APPLIED STATISTICS
PROBABILITY THEORY
ESTIMATION AND TESTING
SAMPLE SURVEYS

Sample Surveys, Concepts of population and sample, need for sampling, Census and sample survey, basic concepts in sampling, organizational aspects of survey sampling, sample selection and sample size.
Some basic sampling methods- simple random sampling (SRS) with and with out replacement.
Stratified random sampling, Systematic sampling, ratio and regression methods of estimation under SRS.
Non sampling errors, acquaintance with the working (questionnaires, sampling design, methods followed in field investigation, principal findings etc.) of NSSO, and other agencies undertaking sample surveys.
APPLIED STATISTICS
Indian Applied Statistical System: Present official statistical system in India, Methods of collection of official statistics, their reliability and limitations, and the principal publications
containing such statistics on the topics- population, agriculture, industry, trade, price, labour and employment, transport and communications.
Demographic Methods : Sources of demographic data - census, register, adhoc survey, hospital records, demographic profiles of Indian census. Measurement of mortality and life tables- crude, death rates, infant mortality rates, death date by cause, standardized death rate, complete life table - its main features, mortality rate and probability of dying, use of survival tables.

Course outcome:

The student should be in a position to understand various concepts

in statistical techniques and statistical surveys. The student should be able to analyse the data using R or similar statistical software

NOV 2018

course-R.

NAME	Roll No.	7/11	7/11	8/11	8/11	9/11	9/11	9/11	9/11				
Saisha Talankar	91												
Ciana Fernandes	88												
Aniva Godinho	89												
Vandana Chari	87												
Seema Manakala	90	second	second	second	Seema	second	second	second	second				
Kevin Julian	86	K·AJ	K·AJ	K·AJ	K·AJ	K·AJ	K·AJ						

Total no. of lectures : 8
Sendi

VAC   R- course

D.C.T's.
EMPE **COLLEGE OF ARTS & SCIENCE**   March 2019   Class : TVBSC   Div. _____
PANJIM - GOA   Academic Year : 2018-19

NAME	Roll No.	8/3	8/3	8/3	13/3	13/3	15/3	15/3	15/3	15/3	15/3	16/3	16/3	16/3	14/3	14/3	19/3	19/3	19/3	19/3	19/3	20/3	20/3	20/3	20/3
	86	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
	87																								
	88																								
	89																								
	90																								
	91																								

Number of lecture = 25

D.C.T's.
HEMPE COLLEGE OF ARTS & SCIENCE
PANJIM - GOA
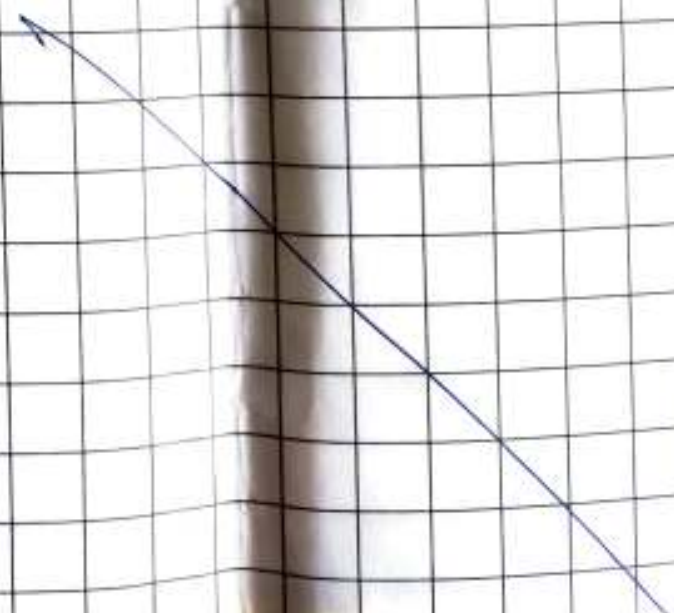
Feb 2019.

Class : TY BSC   Div.
Academic Year : 2018-19

NAME	Roll No.	6/2	7/2	8/2	8/2	19/2	20/2	21/2	22/2	25/2	26/2
	86	K·A	K·A	K·A	K·A	K·A	K·A	K·A	K·A	A	A
	87										
	88										
	89										
	90										
	91										

Number of lecture : 10

NAME	Roll No.	12/1	13/1	15/1	16/1	17/1	19/1	21/1	22	22	23/1	24/1
	86	K·A/o	K·A/o	K·A/o	K·A/o	K·A/o	K·A/o	A	K·A/t	K·A/t	K·A/t	K·A/t
	87											
	88											
	89	A	A	A	A	A	A	A	A	A	A	A
	90	Second	Second	Second	Second	Second	Second	Second	Second	Second	Second	
	91											

Number of lecture : 91

D.C.T's.
DHEMPE COLLEGE OF ARTS & SCIENCE
PANJIM - GOA

December. 2018

Course-R

NAME	Roll No.	5/12	5/12	8/12	10/12	11/12	12/12	21	22	22
	86	K.Afon	K.Afon	K.Afon	K.Afon	K.Afon	K.Afon			
	87	Abhai	Abhai	Abhai	Abhai	Abhai	Abhai			
	88	Ⓐ	Ⓐ	Ⓐ	Ⓐ	Ⓐ	Ⓐ			
	89	Amie	Abdul	A	A	A	A			
	90	Second	Second	Second	Second	Second	Second			
	91	Aniruth	Aniruth	Aniruth	Aniruth	Aniruth	Aniruth	Aniruth	Aniruth	Aniruth

Total no of lectures : 6

Dempo Charities Trust's
Dhempe College of Arts and Science
Panaji, Goa

Report of the value added course "**Statistical techniques using R software**" by the mathematics department in the year 2018-19

Course Title: "Statistical techniques using R software"

Department: Mathematics

A value added course in statistical techniques using R software for 60 hours was successfully conducted for the T.Y.B.Sc math students by resource person Miss Sujata Desai, Assistant Professor dept. of mathematics. The course was also coordinated by Miss Sujata Desai. It was attended by 06 T.Y.B.sc students. The students were introduced the basic of how R software works, how to install R software and all the statistical techniques using R studio, they were also given the benefit of the state level workshop in R, sponsored by Department of Science and technology, conducted by the department.

This course will be helpful for students for analyzing data and use of the various techniques in statistics. Practice Sessions were conducted for the Participants.

Department: Mathematics

A 30 hour skill Development course in Latex-Mathematical Typesetting coordinated by VitendraMhatondkar was conducted by the dept for students of TYBSc with alumna Akshita Singh as the resource person .The students were introduced to the fundamentals of Latex installation,usage and benefits.They also provided hands on training in the same.At the end of the course the students were able to successfully install LaTeXand its related components on a home/personal computer ,use LaTeX and various templates required from the course to compose mathematical documents,presentations and reports.