

## JanataShikshanSanstha's KISAN VEER MAHAVIDYALAYA, WAI



#### **Certificate Course Report**

### **Supportive Documents for Certificate Course Annual Report**

#### Certificate Course Annual Report includes-

- 1. Short Report of the Particular Academic Year
- 2. Notice regarding the Introduction date of the course
- 3. Syllabus of the Course
- 4. Course Objectives and Outcomes
- 5. List of enrolled students.
- 6. Result
- 7. One Sample Certificate

Janta Shikshan Sanstha's



#### Kisan Veer Mahavidyalay, Wai

Department of Statistics





**Duration: 40 Clock Hours** 

Classes offered: B.Sc. III (STATISTICS)

#### **Course Description:**

In this course you will learn how to program in R and how to use R for effective data analysis. You will learn how to install and configure software necessary for a statistical analysis. The course covers practical issues in statistical computing which includes programming in R, reading data into R, accessing R packages, writing R functions.

#### **Course Objectives:**

- ★ To introduce statistical Technology to the students.
- ★ To get the knowledge for analysis of statistical data by using R software.
- ★ To get job opportunities in industrial sector.
- To develop a skill for statistical consultancy

#### **Course Content:**

- ★ Introduction to R
- Methods of Data Input
- Diagrammatic presentation
- ★ Preparation of frequency table and graphical representation
- ★ Measures of central tendency and dispersion
- ★ Measures of Moments ,Skewness and kurtosis
- ★ Probability and Probability Distribution
- ★ Statistical Inference

#### Course Outcome:

- 1. To learn installation and configuration of R
- 2. To access and read data
- 3. To access packages in R
- 4. To write programs in R

#### **Examination System:**

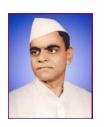
Exam is conducted along with Shivaji University practical exam.

The exam is conducted in a practical manner.

Course Co-ordinator
Mr. R. H. Waliv
Dept. of Statistics



## JanataShikshanSanstha's KISAN VEER MAHAVIDYALAYA, WAI



**Department of Statistics** 

# "Certificate course in R- Software" Course Report 2022-23



Janata Shikshan Sanstha's

KISAN VEER MAHAVIDYALAYA, WAI

Department of Statistics



"Certificate course in R-Software" Course Report 2022-23

The Department of Statistics conducted a certificate course for B.Sc. III entitled "Certificate course in R – Software". The course was conducted during 01/11/2022 to 9/05/2023. The time table was displayed on the notice board of the department.

In all 11 students were admitted for the course. Examination of the said course was conducted along with practical exam of B.Sc. III. Students gained knowledge about using R-software for statistical computation. The supportive staff and the administration of the College and especially the Principal supported a lot in conducting the course.

Principal

Kisan Veer Mahavidyalaya, Wai

ST WILL STATE OF THE STATE OF T

Course Coordinator

Department of Statistics

#### 2. Notice of the Course

Department of Statistics Kisan Veer Mahavidyalaya, Wai Date 18/10/2022

All the students in B.Sc III are hereby informed that "Certificate course in R-Software" is going to start from 01/11/2022 This course is compulsory for B.Sc. III (Statistics) Students.

Head,

Department of Statistics

#### 3. Syllabus of the Course

Janata Shikshan Sanstha's

#### Kisan Veer Mahavidyalaya, Wai Department of Statistics Certificate Course in R- Software

#### Syllabus

#### 1. Introduction to R

- I. Introduction
- II. R as a Statistical Software and language
- III. Data types and arithmetic operators
- IV. R preliminaries

#### 2. Methods of Data Input

- I. C- function
- II. Seq-function
- III. Scan function
- IV. Rep-function
- V. Data-frame function
- VI. Matrix function

#### 3. Diagrammatic presentation

Standard plot functions, arguments to plot function, low level plotting functions Bar diagram, Sub-divided bar diagram, multiple bar diagram, subdivided bar diagram, pie- diagram, stem and leaf plot.

- 4. Preparation of frequency table and graphical representation Construction of frequency distribution table (for discrete and grouped data). Graphical representation- Rod and Spike graph, Histogram, Frequency polygon, Ogive curves.
- 5. Measures of central tendency and dispersion-

Arithmetic Mean, Geometric mean, Harmonic mean, Median, Quartiles Deciles, Percentiles, Mode. Interquartile range, Mean deviation about mean, Variance, Standard Deviation, Coefficient of variation.

#### 6. Measures of Moments ,Skewness and kurtosis-

Raw and central moments, Measures of Skewness, Measures of Kurtosis.

#### 7. Probability and Probability Distribution

Application of Binomial Distribution, Fitting of Binomial distribution Application of hypergeometric distribution, fitting of hypergeometric distribution, Poisson Distribution.

Normal Distribution, Exponential Distribution.

#### 8. Statistical Inference

- I. Sampling distribution of sample mean
- II. Estimation of parameters
- III. Plots to check normality
- IV. Hypothesis testing, chi-square test, t-test, f-test
- V. Goodness of fit tests.

#### 4. Objectives of the Course

#### **Objectives** of the course

- 1) To introduce statistical Technology to the students.
- 2) To get the knowledge for analysis of statistical data by using R software.
- 3) To get job opportunities in industrial sector.
- 4) To develop a skill for statistical consultancy.

#### 5. List of enrolled students

Janata Shikshan Sanstha's
Kisan Veer Mahavidyalaya, Wai
Department of Statistics
List of Students (R Software Course 2022-23)

Sr. No.	Roll No	Name of Student					
1	121	Wadkar Avinash Ananda					
2	122	Shinde Harshad Sharad					
3	123	Bhingare Suraj Sunil					
4	124	Shinde Aditya Santosh					
5	125	Bagal Adarsh Shivaji					
6	126	More Rohan Ganesh					
7	129	Ghadage Supriya Ashok					
8	130	Dhumal Manali Sunil					
9	132	Shelar Akanksha Uttam					
10	133	Sonawale Priti Kisan					
11	135	Gaikwad Sumit Girish					

STHA'S WEEK WAS ALLESTED TO THE STATE OF THE

Head
Department of Statistics
Kisan Veer Mahavidyalaya, Wai

#### 6. Time Table

Janata Shikshan Sanstha's Kisan Veer Mahavidyalaya, Wai B.Sc. III (Statistics)

Year: 2022-23

#### R SOFTWARE COURSE (Time Table)

Sr. No.	Time	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	11.00 to 3.00	Batch-I	Batch-I				

Head

Department of Statistics

#### 7. Attendance Sheet

Styfaltur Byggalad Agitums Agatams Agatams Sygalamds Gygalamd Gygalams Agalams Cygalams Cygalams Sygalams Sygalams 8-11-22 14-11-22 15-11-25 15-11-26 28-11-26 28-11-26 512-22 16-12 50-12-41 -20-11-8 45.55hade HSShinde ASSISTED ASSISTED ASSISTED ASSISTED ASSISTED ASSISTED ASSISTED structure Beaches after and the other of the struct and others are 母、母、母、母、母、母、母、母、母、母 Sausale Sauvale Laurale Laurale Appende Promode opposite Tarnale Tarnale Department of Statistics (B. Sc III) 2022-23 Kisan Veer Mahavidyalaya, Wai R-Software course Attendance Janata Shikshan Sanstha's A STATE OF THE PARTY OF THE PAR Change Konnak Konnade 4 本. 本. 本. E E ASSIGR ASSIGN The state of the s Brimals rhimal BAR 1-11-22 7-11-12 Western Collected KSAL RAIL Mymodis 9 i 122 123 124 135 125 126 129 133 132

# Janata Shikshan Sanstha's Kisan Veer Mahavidyalaya, Wai Department of Statistics (B. Sc III) 2022-23 R-Software conrect Attendarian

	53	3		Stale	j.	.	4	'/	1	1	0	H	N	_	0	1 -
1	13-2-23	(10)		H	A	ADON		X	e		SAA	The same	K	€. Ja.	Land	Olimento.
	7-2-23	Mille		Shape	o.	1 10	200	j	2004	1	A.G.	mat.		The Me	. 6100	-
7	3	9		H	1	90	7	4	8	3 1	0	Š	K	英	9	
	7-2-9	Mull		LIST WINE	A	Aem J		T.	200	1	040	mal		yela.	and wale	1 1 1
	-23	THE STATE OF THE S	1	- L. Marida	4.	Healip	1	i	2	1	8	200	1	N T	alocus.	1.4.4
i	3	9			By		+	*	Bar	12.8	D		-	Delen	Same of	200
	2-1-2	Buch	d. 11. 2.11		Ž.	ARKIOLO.		1	Hor	2		math	-	meter	Marrolle	. Callery
020	2	7			i			*	A.	Ö	2	ST ST	1	2	の名	Lak C
21.12	1	(Ahm)	I.e.C	N O	d.	ASSID R		1	1	O.A.A.	2	Manage	3	AMELON	diam's	Sycake
1-72	2 -	MALA	-c12.		7.	Asside.	-		050			Samons 1	3	1010	estrauthole.	ci/kus
100	3	3	1	1	1				U		9		3		Cal a	5.5.51
10-1-23 16-1-23 14-1-23 22-1-22 21-1-22 2 :	-	MMa	H-S. Shindle H-S. Stando L. C. C. Lo	Y	1	PSS lake	4	34	June	CAC	Sumo!	or or	(Krylan	1	Charlon	Agikunds fryakuvds shipanad Shipanad Shipanad Shipan Shipan Shipanad Shipan
23	11 11	NA.		A		2			1	0	200				1	Rundagic
1-91	(	1	8.8.H	1	3	ASS OF S	+	G	3	T.S.	Syma	(	The land	4	Commen	Shipa
-1-23	7	1	drings A. S. Shinds . Z. E.	A	1	SERVE	4	Dara	16	SHO	Amadi	1	The same	Lynna Pe.	-	を記す
-		1		-	,	-	-	-		K	5	-	_		3	A S.F.
13-12-22 3-1-23	1		世の記せ	A	1 2	ADDEN.	T	- A	K	970	Rhmal		To be	Samale.	-	5/P
1-22	No	1	hirale	4	10	1	ú	1	-	0)	245		8	aught-	1	kua S.C
13-1	8	,	HISS	1	Aco	2 .	4	G C	Q	TO T	Down	3	3	ALICAN	100	2
Roll No	121		771	123	174	101	175	126	170	14.3	130	133	707	133	135	200
Sr. No.		-	7	3	7	1	0	9	7	1	8	6	1	01	-	
5		L								1		4				

# Janata Shikshan Sanstha's Kisan Veer Mahavidyalaya, Wai Department of Statistics (B. Sc III) 2022-23

	1-3-23	Jan 17	HISCHIE	3.8	Buss	K	Pena	(SAD)	Same?	Albelin	Sparrade	S. G. 90
	1-3-23 2		H-S'shind	SB	ASSI de	+ in	Bore	840	Mamale .	Belan (	Saucak.	d S.Gigalto
	2-3-23 2	Blanke 9	prings.c.H	SB	HSING.	K.	of the second	646	Springs	Weber	Spanishe	184. Gaipe
	4-3-23 2	March (	H-Sight ale	3B	ASSECT OF	A	Done	SAR	Rimas	Shelen.	Stowals.	S.G. Gaire
	21-2-23 27-2-82 28-2-23 6-3-23 1-3-23 13-3-23 14-3-23 20-3-23 21-3-23 21-3-23	Blue In	things could be seen by some the strings could be brings and seen by seen by the seen by t	3B		H.	Dee 0	646	Monnog /	Allen .	granale.	S.4. Gaikana S.G. Gaikan S.G. Gaipan S. G. G. G. G. G. G. Gai, S.G. Gaikan S.G. Gaipan S.G. Gaipan S.G. Gaipan
nce	1-3-23	While A	ppoplis. S.F.	SB	MEN-de 1	*	Y A	8 A CO	Smale	(Apriler 1	Granale	15.9.colt
R-Software course Attendance	6-3-23	THE STATE OF THE S	H.S.Shink	SiB	ANDER	* X	Bere	600	8 Minals 1	When	- Lourde	S. G. Galhar
fware cour	28-2-23	ON MA	4. S. Shinde	SB	Back	*	Porc	SAG	manual V	Pholon	Sparole.	S.4.44 top
R-So	27-2-83	(Almanum)	H.S.Shinde	SB	ABURE	· in	Borr	64G	Samole	Bolu	Sawolle	S.C. Gaiked
	21-2-23	Mullin.	H.S.Shinde	98	Other.	4	Bone	846	Amale	Back	Spanole 2	4. Gaikana
	20-7-02	dulus	H.S. Shinde	S.B	Medicale	by by	tone !	SAS	Annals h	Wellen.	Sawale 1	2 pour level S
	Roll No 14-2-23 20-2-23	Bellen (	H-SShinge	A.A.	(S) de	A LINE	- Jame	543	Amals R	Belly 5	Samole 1	9 Galteral S
	Roll No	121	122	123	124	125	126	129	130	132	133 -6	135 5
	Sr. No.	-	2	3	4	5	9	7	8	6	10	=

#### 8. Result

# Janata Shikshan Sanstha's Kisan Veer Mahavidyalaya, Wai Department of Statistics Marksheet of Students R Software Course (2022-23)

Roll No.	Name of Student	Marks
121	Wadkar Avinash Ananda	7
122	Shinde Harshad Sharad	6
123	Bhingare Suraj Sunil	7
124	Shinde Aditya Santosh	7
125	Bagal Adarsh Shivaji	7
126	More Rohan Ganesh	6
129	Ghadage Supriya Ashok	10
130	Dhumal Manali Sunil	10
132	Shelar Akanksha Uttam	10
133	Sonawale Priti Kisan	10
135	Gaikwad Sumit Girish	6

SINSTHATO \* WHY

Head
Department of Statistics
Kisan Veer Mahavidyalaya, Wai

#### 9. One Sample Certificate



Janata Shikshan Sanstha's

# KISAN VEER MAHAVIDYALAYA, WAI. DIST- SATARA





This is to certify that Mr / Miss Dhumal Manali Sunil has Successfully

completed the Certificate Course in "R-Software" conducted by Department of Statistics

Kisan Veer Mahavidyalaya, Wai, Dist- Satara during the academic year 2022 - 2023

Head, Dept of Statistics

Principal