Vivekanand College Kolhapur (Autonomous)

Department of Statistics

Notice

Date: - 09/01/2020

All students of the department of statistics are hereby informed that there will be a workshop on "**R- Programming**", held on 11th January 2020 to 18th January 2020 from 08.00 am to 10.00 am onwards at Statistics Lab.

Note: The attendance of students is compulsory.

Ms. V.V. Pawar
Head
Department of Statistics
VIVEKANAND COLLEGE, KOLHAPUR
(AUTONOMOUS)

"ज्ञान विज्ञान आणि सुसंस्कार यांसाठी शिक्षण प्रसार"

-शिक्षणमहर्षी डॉ. बापूजी साळुंखे

Vivekanand College, Kolhapur
Department of Statistics

Title: Workshop on R-Programming

Time Table

Day	Day & Date	Topic Name	Lecturer	Time
1	Saturday 11/01/2020	Unit 1, 2 and 3.	Mr. S. M. Patil	8.00 am -10.00am
2	Sunday 12/01/2020			8.00 am -10.00am
3	Monday 13/01/2020	Unit 4, 5, 6 and 7.	Mr. M. S. Barale	8.00 am -10.00am
4	Tuesday 14/01/2020			8.00 am -10.00am
5	Wednesday 15/01/2020			8.00 am -10.00am
6	Thursday 16/01/2020	Unit 8, 9 and 10.	Dr. S. S. Sutar	8.00 am -10.00am
7	Friday 17/01/2020			8.00 am -10.00am
8	Saturday 18/01/2020	Practical Session	-	8.00 am -10.00am

Ms V.V Pawar

Head
Department of Statistics
Vivekanand College Kolhapur

Dr.S.Y.Hongekar

PRINCIPAL
Vivekanand College
Kolhapur

Syllabus

Introduction to R

Units:

1. Installation and introduction to R, History.

2. Data Input/ Output and Operators

Assignment Operators in R: Leftwards assignment (<-, <<-, =), Rightwards assignment (->, ->>)

-Creation of vector using commands: Combine (c), scan, cbind, rbind, seq, rep, edit, sort, length, which, order.

-Relation operators: Less than, Greater than, Less than or equal to, Greater than or equal to, Equal to, Not equal to.

-Logical Operators: Logical NOT, Element-wise logical AND, Logical AND, Element-wise logical OR, Logical OR

3. Operations on data

-Operations on vectors: sum, prod, sort, rank, multiplication, division, exponent, modulus, integer division, max, min, summary.

- Object identification: is.na, is.numeric, is.character, is.matrix, is.vector, is.null, is.factor, as. Functions.

4. Matrix manipulation:

-Creation of Matrix, Transpose, Addition, Subtraction, Multiplication, Determinant, Inverse of matrix, rank of matrix, diagonal matrix, zero matrix, common matrix.

5. Creation of data frame using commands: data.frame, dimension of data frame, extracton of elements of data frame, rbind, cbind functions, rowSums, colSums, rowMeans, colMeans, subset, attach, detach, apply functions.

6. Import and export data: read.table, read.csv, file.choose, write.table, write.csv.

7. Data visualization: r plot, Scatter Plot, hist, boxplot.

   - Diagrammatic representation of data: simple bar diagram, Sub - divided simple bar diagram, pie diagram.

   - Graphical representation of data: Histogram, frequency polygon, Ogive curves.

8. For loop, while loop, if else statement, break statement.

9. Exploratory data analysis: mean, variance, quantiles, pdf, cdf, random numbers, correlation, summary.

10. Statistical tools: prop.test, t.test, wilcox.test, ks.test, chisq.test, cor.test, linear regression. Installation of packages.

Sr No	Roll No.	11/1/20	12.1.2020	13.1.2020	14/1/20	15.1.2020	16.1.2020	17.1.2020
1	8201	Boudeau	A	A	Boudeau	A	A	A
2	8202	Rane	Rane	Rane	Rane	Rane	Rane	Rane
3	8203	Adhiraj	Adhiraj	Adhiraj	Adhiraj	/	Adhiraj	Adhiraj
4	8204	S.S.Kamble	S.S.Kamble	S.S.Kamble	S.S.Kamble	S.S.Kamble	S.S.Kamble	S.S.Kamble
5	8205	Aajadhav	Aajadhav	Aajadhav	Aajadhav	Aajadhav	Aajadhav	Aajadhav
6	8206	AmPatil	Ampatil	Ampatil	Ampatil	Ampatil	Ampatil	Ampatil
7	8207	NPatil	NPatil	NPatil	NPatil	NPatil	NPatil	NPatil
8	8208	TShinde	TShinde	TShinde	TShinde	TShinde	TShinde	TShinde
9	8209	Bombel	Bombel	A	Bombel	Bombel	Bombel	Bombel
10	8210	Rule	Rule	Rule	Rule	Rule	Rule	Rule
11	8211	Shandan	Shandan	Shandan	Shandan	Shandan	Shandan	Shandan
12	8212	Supkar	Supkar	Supkar	Supkar	Supkar	Supkar	Supkar
13	8213	Butar	Butar	Butar	Butar	Butar	Butar	Butar
14	8214	PB	PB	PB2	PB	PB2	PB2	PB2
15	8215	A	JTof	JTof	JTof	JTof	JTof	JTof
16	8216	RBttom	RBttom	RBttom	RBttom	RBttom	RBttom	RBttom
17	8217	DPatil	DPatil	A	DPatil	DPatil	DPatil	DPatil
18	8218	A	A	Aravade	Aravade	/	Aravade	Aravade
19	8219	A	A	Shblem	Shblem	Shblem	Shblem	Shblem
20	8220	GSk	GSk	GSk	GSk	GSk	GSk	GSk
21	8221	A	A				Tawar	Tawar
22	8222	D.K.G.	D.K.G.	D.K.G.	D.K.G.	D.K.G.	D.K.G.	D.K.G.
23	8223	A	A	A	A	A	A	A
24	8224	Patil	Patil	Patil	Patil	Patil	Patil	Patil
25	8225	A	/	Patil	Patil	Patil	Patil	Patil
26	8226	Shinde	Shinde	Shinde	Shinde	Shinde	Shinde	Shinde
27	8227	Meu	Meu	Meu	Meu	Meu	Meu	Meu
28	8228	Pauj	Pauj	Pauj	Pauj	Pauj	Pauj	Pauj
29	8229	Aish	Aish	Aish	Aish	Aish	Aish	Aish
30	8230	Deorkar	Deorkar	/	Deorkar	Deorkar	Deorkar	Deorkar
31	8231	Kmml	A	A	Kmml	Kmml	Kmml	Kmml
32	8232	SPatil	SPatil	SPatil	SPatil	SPatil	SPatil	SPatil
33	8233	Nmchagule	Nmchagule	Nmchagule	Nmchagule	Nmchagule	Nmchagule	Nmchagule
34	8234	OPatil	OPatil	OPatil	OPatil	OPatil	OPatil	OPatil
35	8235	AaPatil	AaPatil	AaPatil	AaPatil	AaPatil	AaPatil	AaPatil
36	8236	Kamble	Kamble	Kamble	Kamble	Kamble	Kamble	Kamble
37	8237	A	Patil	Patil	Patil	Patil	Patil	Patil
38	8238	Rule	Rule	Rule	Rule	Rule	Rule	Rule
39	8239	Shu	Shu	Shu	Shu	Shu	Shu	Shu
40	8240	Shalunde	Shalunde	Shalunde	Shalunde	Shalunde	Shalunde	Shalunde

Vivekanand College, Kolhapur Department of Statistics
B. Sc. III Roll Call 2019 – 2020   Prof._____

Sr No	Roll No.	18·1·2020							
1	8201	A							
2	8202	A							
3	8203	Adhiraj							
4	8204	S.S.Kamble							
5	8205	A							
6	8206	Anpatil							
7	8207	NDey							
8	8208	Shinde							
9	8209	Kambal							
10	8210	Rule							
11	8211	Chandan							
12	8212	A							
13	8213	Kulor							
14	8214	RBM							
15	8215	Pat.							
16	8216	Bittan							
17	8217	APatil							
18	8218	Apwadi							
19	8219	Shiftus							
20	8220	GSK							
21	8221	Tawar							
22	8222	RK.G.							
23	8223	A							
24	8224	Patil							
25	8225	Patil							
26	8226	Chri							
27	8227	Deu							
28	8228	Paul							
29	8229	Aish							
30	8230	Darkar							
31	8231	Vamm							
32	8232	BPatil							
33	8233	Nmhagule							
34	8234	CPati							
35	8235	Mapatil							
36	8236	Ambl							
37	8237	BM							
38	8238	Sawe							
39	8239	Yui							
40	8240	Shahinde							

Vivekanand College, Kolhapur (Autonomous)

Internal Quality Assurance Cell

Report on One week workshop on "R- Programming"

1. Name of the Department: Statistics

2. Aim: To introduce students to R-programming.

3. Objectives-

1. To learn basic statistical analysis using Excel.

2. To learn various commands, operations & loops needed to write programs in R.
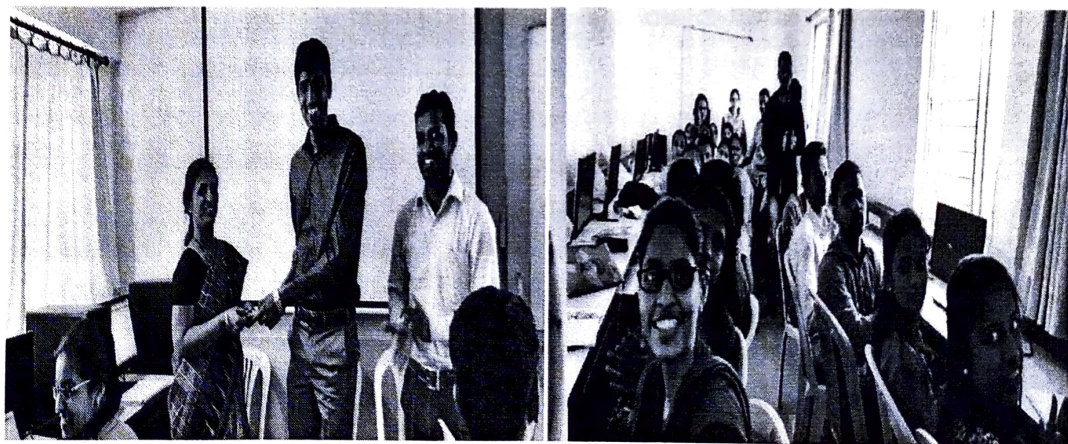
4. Date- 11/01/2020 to 18/01/2020

5. Venue- Statistics Computer lab, Vivekanand college, Kolhapur

6. Resource people:
1. Dr. Santosh Sutar, Director, YCSRD, Shivaji University, Kolhapur,
2. Mr. M. S. Barale, Asst. Prof., Dept. of Statistics, Shivaji University, Kolhapur
3. Mr. Sachin Patil, Asst. Prof., Dept. of Statistics, Shivaji University, Kolhapur
7. No. of beneficiaries- 42 students

8. Brief Description:

The department of Statistics, Vivekanand College, Kolhapur conducted a "Workshop on R" from 11th January 2020 to 18th January 2020. Around 42 students from BSc III and MSc I participated in the workshop. At the inauguration of workshop chief guest Mr. Suchit Wanjare, District Planning Officer, Ratnagiri elaborated importance of R and its use in statistical computing.

In the first session, Mr. Sachin Patil explained – 'What is R?', 'How to download and install it'. He covered basic commands regarding data input-output, creation of vectors, operators like logical, assignment. He also explained creation of matrix and operations on matrix through examples.

In the next session, Mr. Mahesh Barale covered data visualization techniques. He discussed and demonstrated installation of various packages. He also covered various tests used in testing of hypotheses, design of experiments etc. Dr. Santosh Sutar taught various looping statements, which required in program writing.

At the valedictory function students shared their opinions about the workshop and mentioned its usefulness. The vote of thanks was presented by Mr. A. B. Bhosale.

9. Outcomes-

After the completion of the workshop

- Students were able to download and install R.
- They learned to install and load add-in packages
- They understood R data structures, import external data into R for data processing and statistical analysis.

HEAD
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