ISLAMIAH COLLEGE (AUTONOMOUS)

LAB MANUAL

SPSS LAB
U5MSPR51

For the Candidates admitted from the academic year 2018 – 2019

By

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U5MSPR51   SPSS LAB

List of Practical:

1. Mean, Standard deviation, Variance.

2. Bar diagram, Line diagram, Pie chart and Histogram.

3. Co efficient of correlation.

4. Regression equation of X on Y.

5. Regression equation of Y on X.

6. Application of t-test for one sample problem.

7. Application of t-test for two sample problems.

8. Application of t-test for testing the significance of Correlation

   Coefficient.

9. One-tailed and Two-tailed tests.

10. Application of analysis of variance.

Ex.No. 1:   Mean, Standard deviation, Variance
Date:

1. Weight of babies (kg) below 6 months taken from a hospital record is given below. Calculate Mean, Standard Deviation and Variance.

3.0	4.5	4.3	2.5	3.5	2.5	4.0	4.5	6.5	5.0
4.0	5.0	4.1	4.2	4.3	4.5	3.3	3.5	3.6	5.3
5.4	5.5	5.5	5.7	5.8	5.6	5.8	5.9	6.0	3.4
6.1	6.2	6.3	5.5	6.3	6.3	7.0	4.0	3.4	5.0

Aim:

Procedure:

Output:

2. The following table gives the number of working hours and the number of persons to complete a particular task. Calculate Mean, Standard deviation and Variance.

Number of Working Hours	5	6	7	8	9	10	11
Number of Persons	10	12	21	15	10	7	4

Aim:

Procedure:

Output:

3. Calculate the Mean, Standard deviation and Variance for the following data on the height (cm) of 40 students.

151	152	156	175	151	164	174	185	168	160
155	153	165	163	170	167	165	157	164	167
170	174	163	158	165	168	183	172	155	180
159	169	171	155	164	175	159	172	177	185

Aim:

Procedure:

Output:

Ex.No. 2:   Bar diagram, Line diagram, Pie chart and Histogram
Date:

1. Draw a Bar diagram for the following data on the blood group
   of 45 students in a class.

AB	B	O	A	O	O	A	O	B
AB	B	A	B	A	B	OB	AB	A
O	O	A	O	AB	O	O	A	A
B	A	A	AB	O	A	A	O	A
O	A	A	O	A	O	O	B	A

Aim:

Procedure:

Output:

2. Draw the Pie – chart for the following data

11.2	12.0	11.0	12.0	13.0	10.0	11.0	9.0	10.0	10.0
12.0	12.0	12.5	12.0	13.0	11.5	10.5	11.0	11.5	12.0

Aim:

Procedure:

Output:

3. Draw a line graph for age(years) versus systolic blood pressure(mm Hg) for the following data given below.

Age	56	42	60	50	54	49	39	62	65	70
BP	160	130	125	135	145	115	140	120	140	160
Age	40	53	35	38	39	37	70	75	65	64
BP	126	145	118	120	123	138	160	163	145	146

Aim:

Procedure:

Output:

4. Draw a histogram with frequency curve for the following data on height incm

155	171	170	169	167	180	175	150	164	165	163	170
158	153	172	152	163	164	167	159	163	162	168	154
177	164	165	174	164	160	170	157	169	168	165	151
165	174										

Aim:

Procedure:

Output:

Ex.No. 3:   Co efficient of correlation
Date:

1. Find out correlation coefficient for the data given below on
    academic achievements and family income.

Grade Point	75	73	96	61	71	56	50	85	90	54
Family Income(Rs)	8500	7000	6000	12000	12000	5000	18000	9000	7000	8200

Aim:

Procedure:

Output:

2. Calculate correlation coefficient for the following data on the IQ of 10 persons and the number of hours of TV watching.

IQ	106	86	100	101	199	103	97	113	112	110
No. of Hrs of TV Watching	7	0	27	50	28	29	20	12	6	17

Aim:

Procedure:

Output:

Ex.No. 4:   Regression equation of X on Y
Date:

1. Find the regression equation for the following dataSupply(X)
   onPrice(Y)

Supply (X)	80	82	91	83	85	89	96	93	90	92
Price (Y)	146	140	130	117	133	127	115	95	100	97

Aim:

Procedure:

Output:

2. Formulate regression equation for the height of Son on Father for the following data.

Height of Father	165	160	157	158	168	170	171	169	165	163
Height of Son	160	162	155	156	165	168	170	159	161	164

Aim:

Procedure:

Output:

Ex.No. 5:   Regression equation of Y on X

Date:

1. Find the regression equation of Y (Systolic pressure mm HG) on X (age) in man

Age(X)	56	42	72	36	47	55	49	38	42	68	60	63
BP(Y)	147	125	160	118	149	128	150	145	115	140	152	155

Aim:

Procedure:

Output:

Ex.No. 6:   Application of t-test for one sample problem
Date:

1. A business school in its advertisement claims that the salary of
    its graduate in a particular year is at pair with the average salary
    offered at the top 5 business schools. A school sample of 30
    graduate from the business school whose claim was to be
    verified was taken at random. The salaries are given below

Graduate	1	2	3	4	5	6	7	8	9	10
Salary in Rs. 1000	750	600	600	650	700	780	860	810	780	670
Graduate	11	12	13	14	15	16	17	18	19	20
Salary in Rs. 1000	690	550	610	715	755	770	680	670	740	760
Graduate	21	22	23	24	25	26	27	28	29	30
Salary in Rs. 1000	775	845	870	640	690	715	630	685	780	635

The average salary offered at the top five business schools in
that years was given Rs 75000.

Aim:

Procedure:

Output:

2. A random sample at 10 boys has the following IQ's : 70, 120, 110, 101, 88, 83, 95, 98, 107, 200. Do these data support the assumption at population mean IQ's at 100 ?

Aim:

Procedure:

Output:

Ex.No. 7:   Application of t-test for two sample problems
Date:

1. The study was conducted to compare the efficiency works at
   two mines one with private ownership and the other with
   government ownership the research was the conducted there is
   no significant different in their efficiency levels 20 workers
   from the private sector mine and 24 from the government sector
   mine were selected and their average output shift was recurred

Miner	Mine	Output	Miner	Mine	Output	Miner	Mine	Output
1	1	48	16	1	47	31	2	41
2	1	45	17	1	39	32	2	42
3	1	33	18	1	49	33	2	39
4	1	39	19	1	38	34	2	38
5	1	34	20	1	45	35	2	38
6	1	49	21	2	42	36	2	39
7	1	33	22	2	44	37	2	41
8	1	45	233	2	41	38	2	46
9	1	48	24	2	39	39	2	41
10	1	44	25	2	35	40	2	40
11	1	45	26	2	34	41	2	38
12	1	45	27	2	33	42	2	41
13	1	36	28	2	34	43	2	43
14	1	48	29	2	37	44	2	40
15	1	41	30	2	37			

Aim:

Procedure:

Output:

2. Two groups of children were fed on two different diets namely, diet A and diet B. The level of haemoglobin in blood were estimated and presented in the table below. Test the superiority of diet B over diet A in increasing the haemoglobin level

Diet	Haemoglobin (gm%)						
A	10	11	12	11	10	9	10
B	11	11	12	13	11	9	12
A	13	11	11	12	10	9.5	12
B	12	12	12	13	10	10	11

Aim:

Procedure:

Output:

Ex.No. 8:Application of t-test for testing the significance of Correlation Coefficient

Date:

1. A Corporate training institution claimed that is program greatly enhance a efficiency of call centre employee of the measured by the number of data was collected for one before the sending the employers for the training program. After the training program data as given collected on the same employer for the one month period be data was given

Employee	Before training program	After training program	Employee	Before training program	After training program
1	41	44	11	46	39
2	35	36	12	42	46
3	40	48	13	37	36
4	50	47	14	34	39
5	39	40	15	38	50
6	45	52	16	42	46
7	35	35	17	46	49
8	36	51	18	39	42
9	41	46	19	46	51
10	40	55	20	45	37

Aim:

Procedure:

Output:

Ex.No. 9:   One-tailed and Two-tailed tests
Date:

1. The following are the data on increase in pulse rate recorded by
    a doctor on 32 persons while performing a given task. Find
    whether there is a significant increase in pulse rate while
    performing this task.

Increase in pulse rate (beats/minute)							
27	25	19	28	35	23	24	22
14	30	32	34	23	26	29	27
27	24	31	22	23	38	25	16
32	29	26	25	28	26	21	28

Aim:

Procedure:

Output:

2. The pulse rate of two independent random samples, one from male population and the other from female population sitting inside a fast moving coach are given below. Find out whether there is a different in the mean pulse rate of two populations.

| Male | 72 | 69 | 72 | 68 | 68 | 70 | 70 | 68 | 68 | 69 | 69 | 75 | 74 |
| Female | 73 | 72 | 75 | 70 | 68 | 73 | 74 | 74 | 70 | 72 | 71 | 71 | 63 |

Aim:

Procedure:

Output:

Ex.No. 10:   Application of analysis of variance
Date:

1. Perform a multivariate analysis of variance on the following
   data for plasma concentration of calcium and for the rate of
   evaporative water loss.

No hormone treatment				Hormone treatment			
Female		Male		Female		Male	
Plasma calcium	Water loss	Plasma calcium	Water loss	Plasma calcium	Water loss	Plasma calcium	Water loss
16.5	76	14.5	80	39.1	71	32.0	65
18.5	71	11.0	72	26.2	70	23.8	69
12.7	64	10.8	77	21.3	63	28.8	97
14.0	66	14.3	69	35.8	59	25.0	56
12.8	69	10.0	74	40.2	60	29.3	52

Aim:

Procedure:

Output:

2. Perform two way ANOVA to find the interactive influence of herb and sex on blood sugar level.

Normal		Diabetic		Herb 1		Herb 2	
Male	Female	Male	Female	Male	Female	Male	Female
96	101	180	270	180	192	120	130
100	97	225	250	190	170	130	125
111	110	260	230	185	169	130	126
98	108	250	220	190	198	135	140
106	102	265	267	180	174	136	138
105	111	280	284	170	180	140	119

Aim:

Procedure:

Output: