

Q1/ Fill the blanks according to the data in the **demo.sav** for each of age and income in thousand variables

Mean_{age}=

variance_{age} =.....

Mean_{incomes}=

variance_{incomes} =.....

Q2/ Run the **demo.sav** file that saved in SPSS package and do the followings.

- 1- For alarming system, find the total number of all cases that use at least one services **Voice mail** and **Pager system**.
- 2- Write the frequency table of those cases in 1
- 3- Draw the Pie chart for the result after giving the values to cases in 1.

Q3/ In the **bankloan.sav** file, calculate the Pearson correlation coefficient between years with “current employer” and “Household income in thousands” variables. If we transform the second variable into three groups: less than 50.00, more than 100.00 and in between. Find the correlation coefficient after determining the types which must be tricked to determine the association between the first variable and the new transformed one. Compare your answers

Q4/ A random sample of 11 statistics students produced the data in given table, where x is the third exam score out of 80 and y is the final exam score out of 200. Find simple linear regression line, and predict the final exam score of a random

student if you know the third exam score 80. Write the ANOVA table and explain it statistically

x (third exam score)	y (final exam score)
65	175
67	133
71	185
71	163
66	126
75	198
67	153
70	163
71	159
69	151
69	159

Q5/ Two tables below are given. Do the following according to the tables.

One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
Population at risk	6	199035.00	6967.084	2844.300

One-Sample Test

	Test Value = 210000					
	t	df	Sig. (2-tailed)	Mean Difference	99% Confidence Interval of the Difference	
					Lower	Upper
Population at risk	-3.855	5	.006	-10965.000	-16696.40	-5233.60

- 1- Write the type of the test.
- 2- Determine the null hypothesis of the test.
- 3- The level of the significant equals ----- and p-value is -----

4- Is the test statistically significant or not? Explain your answer.

Q6 Test the mean of age variable in *bankloan.sav* file data set with null hypothesis mean equals the **minimum value** and write the P-value of the test with 99% confidence interval. Interrupt the results statistically.

Q7/ A random sample of 11 statistics students produced the data in given table, where x is the third exam score out of 80. If you know that they are normally distributed, and the score 81 is missing value, standardized the data and make a Z-score.

X	$Z = (X - \mu)/\sigma$
65	
67	
71	
71	
81	
75	
67	
70	
71	
69	
69	

Q8 Calculate the Pearson correlation coefficient between years with “current employer” and “Household income in thousands” variables with discussing the results.

Q9/ Run the *demo.sav* file that saved in SPSS package. Find the linear regression between Age and income in thousands. And, answer the following

- 1- The total number of parameters equals, and the total number of data is
- 2- The Pearson correlation is

3- The significant of fitting the model is determined in Table, white the significance of parameters of model is in Table of output.

Q10/ Two tables below are given. Do the following according to the tables.

One-Sample Test

	Test Value = 20					
	t	df	Sig. (2-tailed)	Mean Difference	90% Confidence Interval of the Difference	
					Lower	Upper
Population at risk	-3.855	20	0.02	-10965.000	-16696.40	-5233.60

5- The null hypothesis is, but the alternative hypothesis is

6- The total number of observation is

7- The level of the significant equals ----- and p-value is -----

8- Is the test statistically significant or not? Explain your answer.

Q11/ Run the **demo.sav** file that saved in SPSS package and do the followings.

For alarming system, find the total number of all cases that use at most one services **Voice mail** and **Pager system**.

Q12/ In the **bankloan.sav** file, transform the “Household income in thousands” variable into three groups: less than 50.00, more than 100.00 and in between. Then calculate the Spearman correlation coefficient between years with “current employer” and “Household income in thousands” variables.

Q13/ Answer the following according to given tables

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.873 ^a	.762	.749	874.779

a. Predictors: (Constant), Income

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	44182633.37	1	44182633.37	57.737	.000 ^b
	Residual	13774291.07	18	765238.393		
	Total	57956924.44	19			

a. Dependent Variable: Price

b. Predictors: (Constant), Income

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	8286.786	1852.256		4.474	.000
	Income	.564	.074	.873	7.598	.000

a. Dependent Variable: Price

- 1- The total number of data equal -----.
- 2- The linear regression equation is -----
- 3- The Pearson correlation coefficient equals -----.
- 4- The test is statistically -----

TASK: Run the *bankloan.sav* file in sample folder from IBM-SPSS package contained in program file of PC- C drive, then

Q14 Fill the blanks according to the data in the file *bankloan.sav* and throughout all data above 50 years from the age variable.

- 1- The sample number N was and then it becomes after throughout that data.
- 2- The mean of the new data set equals
- 3- The variance of new data set equals

Q15 Test the mean of age variable (use all data) with null hypothesis mean equals the **maximum value** and write the P-value of the test with interrupt it statistically.

Q16 Calculate the Pearson correlation coefficient between years with “current employer” and “Household income in thousands” variables with discussing the results (use all data).

Q17 Enter the following form into SPSS application program and write down all needed attributes of variables with encode the first question with 1 and 2 in this answer sheet.

Please fill the following fields and check boxes with (\checkmark) to your answer for conducting a specific survey

1- Your result in Applied Statistics exam: Passed Failed

2- Are you employed? : Yes No

3- Your age:

Q18 Test the mean of incomes in thousand variable with null hypothesis mean equals 70 and write the P-value of the test with interrupt it statistically.

Q19 Calculate the Pearson correlation coefficient between age and incomes in thousand variables with discussing the results.

Q20 Enter the following form into SPSS application program and write down all needed attributes of variables with encode the first question with 1,2 and 3 and the second one with 0 and 1, in this answer sheet.

Please fill the following fields and check boxes with (√) to your answer for conducting a specific survey

4- Your age is : under 20 20-24 above 24

5- Are your employed? : Yes No

6- Your scores in Applied Statistics exam:

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