College of Education Theory Examination Subject: Computer Application SPSS
Biology Depts. 2nd Year 2019 -2020 Name:

Q1/A- Mark the following statements with (T) for true and (F) for false: (7M)

1- Inserting a Case. R.C on case then select insert cases.( )
2- Use data editor to show the analyze result. ( )
3- Pearson correlation use Analyze, Descriptive Statistics/ Crosstabs . ( )
4- Crosstab analysis 2 nominal variable with than 2-leabl .( )
5- Variable View is where you see the data you are using.( )
6- Show just One output can one analyze result.( )
7- Choose the Simple Scatter option to graph the relationship between two variables.( )
8- The model summary table results appear in the SPSS syntax Viewer.( )
9- One Sample T-Test is also known as related T-Test.( )
10- One-Sample T-Tests if the mean of a single variable differs from a specified .( )
11- To run correlation, go to Analyze>Compear Mean.( )
12- The straight line is also called the correlation line or the fit line.( )
13- MLR takes dependent variable is explained by more than one independent variable.( )
14- Each data editor cantina three data view.( )

B- Define :1-SPSS 2-Variable view 3-Pi chart (3M)

Q2/A-Find Age and Protein ratio effects on weight explain output use table 1. (5M)

Table (1)

Model	Unstandardized Coefficients		Standardized Coefficients	95.0% Confidence Interval	
	B	Std. Error	Beta	t	Sig.
(Constant)	143.994	48.395		2.975	.031
Age	-1.055	.370	-1.425	-2.852	.036
Protein ratio	-.592	.525	-.563	-1.128	.003

B-Find the difference between Age1 and Ag2 explain output use table 2. (5M)

Pair 1	df	t	Sig. (2-tailed)	Table (2) Paired Differences				
				95% Confidence Interval		Std. Error	Std. Deviation	Mean
				Upper	Lower			
Age1-Age2	500	-1.574	0.144	2.433	-7.433	1.588	5.502	-2.500

-------- With best wishes ---------- Assistant Lec.Paxshan A.Hamad

College of Education Theory Examination Subject: Computer Application SPSS
Biology Depts. 2nd Year 2019 -2020 Name:

Q1/A- Mark the following statements with (T) for true and (F) for false: (7M)

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-------- With best wishes ---------- Assistant Lec.Paxshan A.Hamad

Salahaddin University **Theory Examination** **Name:** **Group**

Education College **2018 -2019** **Subject: Computer Application.SPSS**

Date&Time: 3/3/2019 **Stage:2nd(chemistry &Biology dep.)**

Q1/ Mark the following statements with (T) for true and (F) for false: (8M)

1- One-way ANOVA as an extension of the independent-samples t test. ( )
2- The One-way ANOVA compares the means of 2 or more independent groups.( )
3- If data show "homogeneity of variance", it means that the data are normally distributed. ( )
4- We need to know if there is group effects on dependent variable on between-groups t test. ( )
5- Paired-Sample T-Test is also known as dependent T-Test. ( )
6- AVOVA-test the only one test that require our data are normally distributed. ( )
7- One sample T test us to determine the mean of a sample data is different than a known value. ( )
8- The equal variance assumption you want Levene's test to be significant. ( )
9- A paired samples t-test is used when you have two non related observations. ( )
10- In one way ANOVA Each group represents a different level of a single independent variable. ( )
11- Normality tests on samples of n = 3 to 50 use Kolmogorov ,Smirnov. ( )
12- The test statistic in the ANOVA is an F ratio, which is a ratio of two variances. ( )
13- To do repeated-measures T-test Click on Analyze,Compare Means, and then One-SamplesT test.( )
14- The function you need to use for normality test, click "mathematics " in the Function group box.
15- This hypotheses H0: $\mu_{Section\ 1} = \mu_{Section\ 2}$,H1: $\mu_{Section\ 1} \neq \mu_{Section\ 2}$ for one-way ANOVA table. ( )
16- SPSS Data Editor presented the log transformed data under the new variable name "log---" that you defined.( )

Q2/ Answers the following questions about each tables (A1,A2 andA3) (12M)

1-Analyses Name. 4- Test value.

2-Variable Name and type. 5- P-value .

3- Significant level **α**. 6- H_0 ,H_1 and explain result.

Table A1

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Life in hours	.108	72	.002*	.968	72	.008

Table A2

LOGLife in hours

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	12335.444	2	6167.722	2.977	.058
Within Groups	142958.500	69	2071.862		
Total	155293.944	71			

Dependent Variable:LOG Life in hours **Table A3**

LSD

(I) material type	(J) material type	Mean Difference (I-J)	Std. Error	Sig.	99% Confidence Interval	
					Lower Bound	Upper Bound
Fe	Mg	-21.833	13.140	.101	-56.64	12.97
	MgFe	-31.250	13.140	.020	-66.06	3.56
Mg	Fe	21.833	13.140	.101	-12.97	56.64
	MgFe	-9.417	13.140	.476	-44.22	25.39
MgEe	Fe	31.250	13.140	.020	-3.56	66.06
	Mg	9.417	13.140	.476	-25.39	44.22

Salahaddin University **Theory Examination** **Name:** **Group:**

Education College **2018 -2019** **Subject: Computer Application.SPSS**

Date&Time: 3/3/2019 **Stage:2nd(chemistry &Biology dep.)**

Q1/ Mark the following statements with (T) for true and (F) for false: (8M)

1- The equal variance assumption you want Levene's test to be significant. ( )
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14- Paired-Sample T-Test is also known as dependent T-Test. ( )
15- AVOVA-test the only one test that require our data are normally distributed. ( )
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Q2/ Answers the following questions about each tables (A1,A2 andA3) (12M)

1-Analyses Name.
2-Variable Name and type.
3- Significant level **α**.
4- Test value.
5- P-value .
6- H_0 ,H_1 and explain result.

Table A1

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Redbloodcell	.108	72	.200*	.968	72	.365

Table A2

Redbloodcell

	Sum of Squares	df	Mean Square	F	Sig.

Between Groups	12335.444	2	6167.722	2.977	.058
Within Groups	142958.500	69	2071.862		
Total	155293.944	71			

Dependent Variable: Redbloodcell **Table A3**

LSD

(I) Bloodgroup	(J) Bloodgroup	Mean Difference (I-J)	Std. Error	Sig.	99% Confidence Interval	
					Lower Bound	Upper Bound
A	B	-21.833	13.140	.101	-56.64	12.97
	AB	-31.250	13.140	.020	-66.06	3.56
B	A	21.833	13.140	.101	-12.97	56.64
	AB	-9.417	13.140	.476	-44.22	25.39
AB	A	31.250	13.140	.020	-3.56	66.06
	B	9.417	13.140	.476	-25.39	44.22

Education College Theory Examination Subject: Computer Application SPSS
Chemistry Depts. 2nd Year Date:

Q1/Mark the following statements with (T) for true and (F) for false: (7M)

15- MLR process fits a model relating a response variable Y to predictor variable X.
16- Compare paired or related data by Wilcoxon's test.
17- Paired-Sample T-Test we need to define group.
18- Crosstab analysis tow nominal variable with more than 2-leabl .
19- Pearson correlation use Analyze ,Descriptive Statistics/Crosstabs .
20- One output can show just one analyze result.
21- Choose the Simple Scatter option to graph the relationship between two variables.
22- computing T-Test between two or more variables used analyze list +crosstab.
23- The One-Sample T-Tests if the mean of a single variable differs from a specified
24- Inserting a Case. R.C on case then select insert cases.
25- Independent-Samples T-Test if we need to examine 3 group differences on scale variables.

Q2/Chose the correct answer: (7M)

1. To run this……, go to Analyze>Compear Mean
   a. correlation b. regression c.one-wayANOVA d.2-wayANOVA
2. A multiple regression takes that your dependent variable is explained by more than …… independent variable.
   a. two b. four c.three d.one
3. The test statistic in the ANOVA is an …….
   a. F-ratio b. T-test c. Addj.R^2 d. R^2
4. The straight line is also called the ……line or the fit line.
   a. correlation b. regression c.one-wayANOVA d.2-wayANOVA
5. The ANOVA summary table results appear in the SPSS ……Viewer.
   a. input b. output c. syntax d. script
6. ……Sample T-Test is also known as related T-Test.
   a. depend b. in depend c. Paired d.one
7. Each data editor cantina …… data view.
   a. four b. one c. three d. two

Q3/ write the steps when: (8M)

1. **Computing correlation between scale and nominal variable.**
2. **Analyze Kruskal-Wallis One-Way ANOVA.**

Q3/Answering the following questions by using the tables(A&B) below : (8M)

1. Determine the Analyze Name.
2. Determine the significant level.
3. Writ the statistical hypothesis
4. Calculate the test statistic.
5. Write variables name and type.
6. Compare **The output.**

Table A

Shapiro-Wilk			Kolmogorov-Smirnov[a]			
Sig.	df	Statistic	Sig.	df	Statistic	
.057	12	.859	.065	12	.235	Age
.817	12	.962	.200*	12	.140	Protein ratio

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Table B

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
	B	Std. Error	Beta			Lower Bound	Upper Bound
(Constant)	143.994	48.395		2.975	.031	19.590	268.398
Age	-1.055	.370	-1.425	-2.852	.036	-2.006	-.104
Protein ratio	-.592	.525	-.563	-1.128	.311	-1.941	.757

a. Dependent Variable: weight

With best wishes

Assistant Lec.Paxshan A.Hamad

Education College **Theory Examination** **Subject: Computer Application SPSS**
Chemistry Depts. 2nd Year **Date:**

Q1/Mark the following statements with (T) for true and (F) for false: (7M)

1- In Variable View we can change font option.
2- comparing 2 independent groups using the Mann-Whitney Test.
3- Simple linear Regression we want to find the relationship between one scale variables.
4- Statistical tests AVOVA require that our data are normally distributed.
5- If we need to know there is gender effects on cholesterol then use paired simple T-Test.
6- The test statistic in the ANOVA is an F ratio, which is a ratio of two variances .
7- For tests on samples of n = 3 to 50 use Shapiro Wilks normality test.
8- Form Option in One-sample T-Test we change significant level a.
9- Transforming data is performed for transformed data is normally distributed.
10- One -way ANOVA compares the means of two or more independent groups.
11- Phi- correlation use Analyze, Correlation, Bivariate.
12- To run the multiple linear regression, go to Analyze>Regression>Linear.
13- Post hoc analyses to determine which of the sample means are different.

Q2/Chose the correct answer: (7M)

1. ANOVA is to understand if there is an interaction between the ……. independent variables on the dependent variable.

   a. two b. four c.three d.one

2. ……button, make sure that mean difference between groups are compear .

   a. options b. post hoc c. statistics d. plots

3. ……it is file extension when we save output.

   a. sav b.spv c. sbv d.sbs

4. ……..is graphical way to represent simple linear regression.

   a. bar-chart b. pi-chart c. scatter d. histogram

5. ……..menu item would you use for cutting, copying, and pasting in the SPSS data editor.

   a. file b. data c. view d. edit

6. ……it is file extension when we save data editor.

   a. sav b.spv c. sbv d.sbs

7.Multiple linear regression are relation between three ……variables.

   a. nominal b. scale c. ordinal d. metric

Q3/ write the steps when (8M)

a. If the data about three samples, how can we know the effect each of them.

b. Non parametric Mann-Whitney Test.

Q4/Answering the following questions by using the tables(A&B) below : (8M)

1. Determine the Analyze Name.
2. Determine the significant level.
3. Writ the statistical hypothesis
4. Calculate the test statistic.
5. Write variables name and type.
6. Compare the output.

Table A

Shapiro-Wilk			Kolmogorov-Smirnov[a]			
Sig.	df	Statistic	Sig.	Df	Statistic	
.077	500	.859	.065	500	.235	Age1
0.817	500	.962	.200*	500	.140	Age2

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Table B

Sig. (2-tailed)	df	t	Paired Differences						
			99% Confidence Interval of the Difference		Std. Error Mean	Std. Deviation	Mean		
			Upper	Lower					
0.144	500	-1.574	2.433	-7.433	1.588	5.502	-2.500	Age1-Age2	Pair 1

Education College **Theory Examination** **Subject: Computer Application SPSS**
Chemistry Depts. 2nd Year **2017 -2018** **Name:**

Q1/A- Mark the following statements with (T) for true and (F) for false: (7M)

1- MLR process fits a model relating a response variable Y to predictor variable X. ( )
2- Paired-Sample T-Test we need to define group. ( )
3- Pearson correlation use Analyze ,Descriptive Statistics/Crosstabs . ( )
4- Choose the Simple Scatter option to graph the relationship between two variables. ( )
5- The One-Sample T-Tests if the mean of a single variable differs from a specified constant. ( )
6- Independent-Samples T-Test if we need to examine 3 group differences on scale variables. ( )
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10- Paired-Sample T-Test is also known as independent T-Test. ( )
11- One -way ANOVA compares the means of two or more independent groups. ( )
12- Phi- correlation use Analyze, Correlation, Bivariate. ( )
13- The test statistic in the ANOVA is an F-ratio. ( )
14- Post hoc analyses to determine which of the sample means are different. ( )

B- Write the steps to analyze independ sample T-Test: (3M)

Q2/A-Find Zinc-Carbon,Lithium life and Temperature effects on number of Batteries sold use table 1. (5M)

Coefficients': Table 1

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	99.0% Confidence Interval for B	
	B	Std. Error	Beta			Lower Bound	Upper Bound
1 (Constant)	304.299	63.544		4.789	.001	91.086	517.512
Zinc-Carbon	.207	2.247	.140	.092	.929	-7.332-	7.747
Lithium	.830	2.567	.526	.323	.755	-7.783-	9.442
Temperature	-1.285-	1.821	-.230-	-.706-	.500	-7.395-	4.825

B-Find Temperature effect on Zinc-Carbon Batteries life use table 2. (5M)

Zinc-Carbon ANOVA: Table 2

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	18763.167	2	9381.583	31.641	.000
Within Groups	2668.500	9	296.500		
Total	21431.667	11			

With best wishes

---------- **Assistant Lec.Paxshan A.Hamad**