

Kingdom of Saudi Arabia

Ministry of Higher Education

Salman bin Abdulaziz University

College of Science, and

Humanitarian Studies in Al-Aflaj,

Department of Mathematics



Course name: Statistical Packages

Course number: Stat 3280

Time: Two hours

Total Marks: 60 Mark

Date: 29 / 7 /1435 A.H.

Final Exam (Second Semester) 1434/1435 A.H.

Number of page:

Student Name:

Registration Number:

Answer the Following Questions

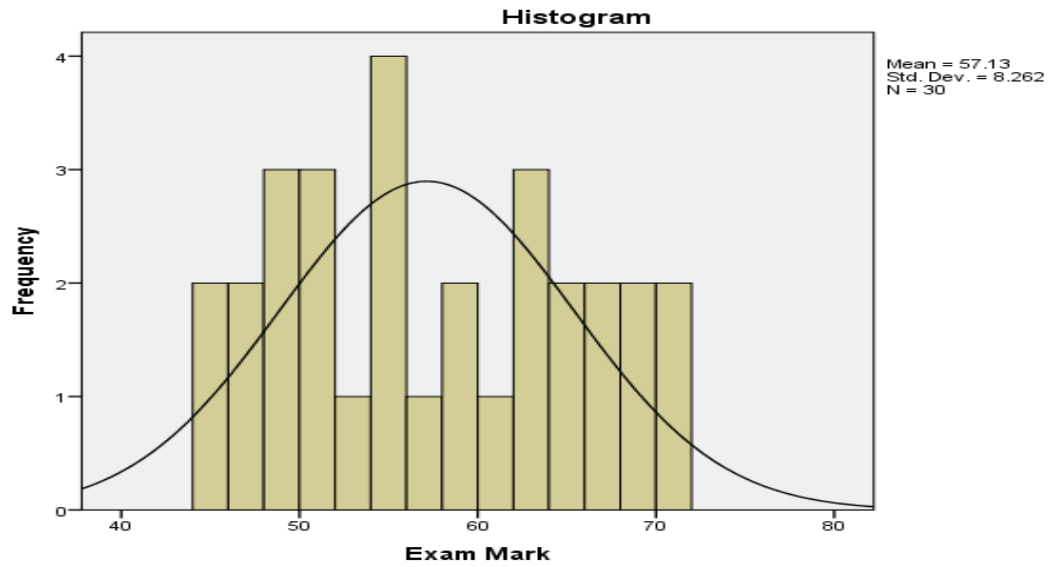
Analyzed the results in the following statistical tables and Write necessary conditions to make the required test if available:-

Question 1 (3 Marks):

Statistics		
Exam Mark		
N	Valid	30
	Missing	0
Mean		57.13
Std. Error of Mean		1.508
Median		56.00
Mode		50
Std. Deviation		8.262
Variance		68.257
Skewness		.141
Std. Error of Skewness		.427
Kurtosis		-1.324
Std. Error of Kurtosis		.833
Range		26
Minimum		45
Maximum		71
Sum		1714
Percentiles	25	49.75
	50	56.00
	75	65.00

Questions	Marks
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
أعمال الفصل	
Total	

Question 2 (2 Marks):



Question 3 (6 Marks):

Tests of Normality						
	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Exam Mark	.139	30	.142	.937	30	.075

a. Lilliefors Significance Correction, Where $\alpha = 0.05$

Question 4 (3 Marks):**Descriptives**

		Statistic	Std. Error	
Exam Mark	Mean	57.13	1.508	
	91% Confidence Interval for Mean	Lower Bound	54.49	
		Upper Bound	59.78	
	5% Trimmed Mean		57.06	
	Median		56.00	
	Variance		68.257	
	Std. Deviation		8.262	
	Minimum		45	
	Maximum		71	
	Range		26	
	Interquartile Range		15	
	Skewness		.141	.427
	Kurtosis		-1.324-	.833

Question 5 (5 Marks):**One-Sample Test**

	Test Value = 60					
	t	df	Sig. (2- tailed)	Mean Difference	96% Confidence Interval of the Difference	
					Lower	Upper
Exam Mark	-1.900	29	.067	-2.867-	-6.11-	.38

Question 6 (5 Marks):

ANOVA					
Exam Mark					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	548.467	2	274.233	6.230	.006
Within Groups	1188.500	27	44.019		
Total	1736.967	29			

Where $\alpha = 0.035$

Question 7 (5 Marks):

Test of Homogeneity of Variances			
Exam Mark			
Levene Statistic	df1	df2	Sig.
3.870	2	27	.033

Where $\alpha = 0.036$

Question 8 (8 Marks):

Multiple Comparisons						
Dependent Variable: Exam Mark						
LSD						
(I) Type of Teaching Method	(J) Type of Teaching Method	Mean Difference (I-J)	Std. Error	Sig.	97% Confidence Interval	
					Lower Bound	Upper Bound
1	2	.700	2.967	.815	-6.10-	7.50
	3	-8.700*	2.967	.007	-15.50-	-1.90-
2	1	-.700-	2.967	.815	-7.50-	6.10
	3	-9.400*	2.967	.004	-16.20-	-2.60-
3	1	8.700*	2.967	.007	1.90	15.50
	2	9.400*	2.967	.004	2.60	16.20

*. The mean difference is significant at the 0.03 level.

Question 9 (10 Marks):

Tests of Between-Subjects Effects

Dependent Variable: Exam Mark

Source	Type II Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	229.143 ^a	9	25.460	1.080	.422	.351
group	123.714	3	41.238	1.749	.193	.226
degree	105.429	6	17.571	.745	.621	.199
Error	424.286	18	23.571			
Total	105330.000	28				
Corrected Total	653.429	27				

a. R Squared = .351 (Adjusted R Squared = .026), Where $\alpha = 0.04$

Question 10 (5 Marks):

Paired Samples Test									
		Paired Differences				t	df	Sig. (2-tailed)	
		Mean	Std. Deviation	Std. Error Mean	94% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	d1- d2	.167	2.697	.551	-.923-	1.256	.403	20	.025

Question 11 (8 Marks): By Excel:

Anova: Single Factor			Where $\alpha = 0.07$			
						SUMMARY
		Variance	Average	Sum	Count	Groups
		13	6.5	78	12	st
		4.44697	6.916667	83	12	m1
		3.454545	7	84	12	m2
		4.727273	7	84	12	m3
		4.242424	7.333333	88	12	m4
				ANOVA		
<i>F crit</i>	<i>P-value</i>	<i>F</i>	<i>MS</i>	<i>df</i>	<i>SS</i>	<i>Source of Variation</i>
2.696986	0.048544	0.178544	1.066667	4	4.266667	Between Groups
			5.974242	55	328.5833	Within Groups
				59	332.85	Total

===== انتهى الاسئلة =====

رئيس قسم الرياضيات
دكتور/ أحمد عبد الرحمن فرغلي

استاذ المقرر
دكتور/ منصور علي