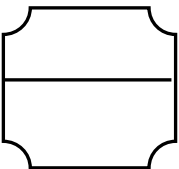


KAU University	Stat 453	First semester-1429/1430 H	
Science College	final exam	Statistics Dep.	
Student name:	ID:		

Question (1):

These data from problem with repeated-measures design, and rated from 1 to 10

participant	A	B	C	D	E
1	3.9	4.1	4.2	4.1	3.3
2	9.4	9.5	9.4	9.0	8.6
3	9.7	9.3	9.3	9.2	8.4
4	8.3	8.0	7.9	8.6	7.4
5	9.8	8.9	9.0	9.0	8.3
6	9.9	10.0	9.7	9.6	9.1

- 1) Create a data file for the previous data
- 2) Is there a significant difference between the medians of groups?
- 3) If these data indicating significant difference between medians, make just one suitable follow-up test?

Question (2):

Choose the correct answer:

1- The test which evaluates whether the proportions associated with a two-category variable are equal to hypothesized values is:

- a) Chi-square test                      b) Binomial test                      c) Kruskal-Wallis test

2- ----- is the product of the hypothesized proportion times the total sample size for the study.

- a) Expected frequency                      b) Observed frequency                      c) Effect size

3- The ----- test is an extension of the McNemar test.

- a) Friedman                                      b) Cochran                                      c) Wilcoxon

Question (3):

Three types of fertilizer (أسمدة) were randomly distributed for a group of farms (مزارع) which contain the same fruit; all farms are similar in the aggregation way (طريقة الري) and other conditions, the test was done to decide if fertilizer effect was equal in the farms.

Ranks			
group		N	Mean Rank
crop	fertilizer 1	6	13.50
	fertilizer 2	7	7.07
	fertilizer 3	5	8.10
	Total	18	

Test Statistics <sup>a,b</sup>	
	crop
Chi-Square	5.172
df	2
Asymp. Sig.	.075

- 1) The test used is .....
- 2) The hypothesis are  $H_o$  :  
 $H_1$  :
- 3) The sum of ranks for fertilizer (1) is .....
- 4) The conclusion for this test is .....  
.....

**Question (4):**

**Two random sample indicate the pollution level (مستوى التلوث) in water of two rivers, the high number mean high level of pollution**

**River (1): 2.7   1.4   2.0   1.2   2.1**

**River (2): 2.9   2.4   3.7   1.6   2.4**

**Are these data indicating significant difference in the pollution level for the two rivers?**

**Good luck**

**Mona Al-Zanbagi**