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[a,b]

	crop
Chi-Square	5.172
df	2
Asymp. Sig.	.075

1) The test used is ……..

2) The hypothesis are $H_{\circ}$:

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

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