| KAU University | Stat 453 | First semester-1429/1430 H |
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| Science College | Quiz 1 | Statistics Dep. |
| Student name: |  |  |
|  |  |  |

Question (1):
Some researchers wanted to compare between two new types of medicines for treatment of nausea (الغثيان) after surgery (علية), they selected a sample of 180 patients scheduled for surgery, $\mathbf{6 0}$ patients were given medicine (A), $\mathbf{6 0}$ patients were given medicine (B), the last 60 patients were not given any drugs for nausea.

After a short time, these patients were classified in terms of degree of nausea and the kind of medicine.

1) Create a data file and give the categories these names medicine and nausea:

|  | Degree of nausea |  |  |  | Total |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | none | simple | moderate | high |  |
| Medicine A | 40 | 10 | 6 | 4 | 60 |
| Medicine B | 36 | 12 | 4 | 8 | 60 |
| No Medicine | 30 | 16 | 8 | 6 | 60 |
| Total | 106 | 38 | 18 | 18 | 180 |

2) By using the suitable test, Are these data indicating significant differences between the drugs used and their impact (تُثّير) in reducing (تقلير) nausea after surgery?

## Question (2):

This is an output of certain study, its goal was to know the consumers (مستهلكين) opinion for goods (سلع) before sale and after it, by using two different tests, complete the following:
prefernce before sale \& prefernce after sale

| prefernce before sale | prefernce after sale |  |  |
| :--- | ---: | ---: | :---: |
|  | 0 |  |  |


| Test Statistics $^{\mathrm{b}}$ |  |
| :--- | ---: |
|  | prefernce <br> before sale <br> \& prefernce <br> after sale |
| N | 25 |
| Exact Sig. (2-tailed) | $.289^{\mathrm{a}}$ |

1) The test used is
2) The number of consumers
who extremely prefer goods
before sale $=$ $\qquad$
3) the size of sample = $\qquad$

Frequencies

|  |  | N |
| :---: | :---: | :---: |
| prefernce after sale - <br> prefernce before sale Negative Differenceß <br>  Positive Differences <br>  Ties $^{c}$ <br>  Total |  | 6 16 3 25 |
| a. prefernce after sale < prefernce before sale <br> b. prefernce after sale > prefernce before sale <br> c. prefernce after sale $=$ prefernce before sale <br> Test Statistic ${ }^{5}$ |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  | prefemce after sale prefemce before sale |  |
| Exact Sig. (2-tailed) | 052 |  |

1) The test used is $\qquad$
2) The percentage of consumers who prefer goods after sale more than before it = $\qquad$
3) the hypothesis for this test:
$H_{0}:$
$H_{1}:$
