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**17/MHS01/074**

**ANATOMY 300L**

**STAT 312**

**ASSIGNMENT**

Questions

* What do you understand by hypothesis testing?
* Differentiate between the classical and the p-value approach for hypothesis testing
* What is the importance of hypothesis testing in research?

**SOLUTION:**

1. Hypothesis testing is a statistical test that aids administrators, clinicians and researchers to know if the hypothesis assumed for a sample of data is true for the entire population or not. It also helps them make wise decisions which usually depend on statistical decision

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| **Classical values** | **P- values** |
| **The classical value approach for hypothesis testing is an approach of hypothesis testing in which the test statistic is computed from the empirical data and then compared with the critical value** | **The P-value approach for hypothesis testing is the probability that the computed value of a test statistics is at least as extreme as a specified value of the test statistics when the null hypothesis is true**  **It is simply the smallest value of α for which we can reject a null hypothesis** |

1. . In essence, a hypothesis test is a test of significance. It is how you decide if something really happened, or if certain treatments have positive effects, or if groups differ from each other or if one variable predicts another. Basically, you want to proof if your data is statistically significant and unlikely to have occurred by chance alone. And since a hypothesis is defined as a statement about one or more population set up for the purpose of being discredited or approved, then it can be said that the main importance of hypothesis testing is to show if a hypothesis stands or not