## Practice Questions

1. How do you assess the statistical significance of an insight?

2. What is the Central Limit Theorem? Explain it. Why is it important?

3. What is the statistical power?

4. How do you control for biases?

5. What are confounding variables?

6. What is A/B testing?

7. What are confidence intervals?

1. It is not suitable to use statistical tools to determine whether insight is critical since they are not identifiable but numbers or math. Even mood of the people may affect the insight, thus statistical significance of insights cannot be determined by math. However, logical assumptions can be held to determine it.
2. Central Limit Theorem is a methodology that assumes even if the underlying distribution of samples taken from process not normally distributed, means of collected sample will converge to normal distribution. It is important since we conduct all the test based on this theorem.
3. Statistical power refers to significance level of probability of hypothesis. In general, less than 5 percent is considered as statistically insignificant.
4. Sampling must be done in such a way that variability within samples should be minimized while it is maximized between samples.
5. Confounding variable is a variable that is affecting two other variables in a way that produces spurious association between two variables.
6. A/B testing is a test conducted to measure performance of your system to improve it by dividing population into two samples and comparing relative outcomes.
7. Confidence interval refers to probability that parameters of population will fall between a set of values for a certain proportion of time.