[Frequently Asked Questions]

[Quantitative Techniques for Management]

Subject:	Business Economics
Course:	B.A., 3rd Semester, Undergraduate
Paper No. & Title:	Paper – 304 Business Economics
Unit No. & Title:	1(one) Sampling and hypothesis Testing
Lecture No. & Title:	2: Hypothesis – Large Sample Test & Chi square Test

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FAQ:

1. **What do you mean by large sample?**
   Ans.: A sample with size 30 or more is generally considered as a large sample.

2. **List the tests for variables.**
   Ans.: (i) Test for single mean, (ii) Test for two means, (iii) Test for two standard deviations(or variances).

3. **List the tests for attributes.**
   Ans.: (i) Test for single proportion, (ii) Test for two proportions.

4. **State the general formula of test statistic used in large sample test.**
   Ans.: The general formula of test statistic used in large sample test is

$$|Z| = \frac{|Difference|}{S.E}$$

5. **What is confidence interval?**
   Ans.: An interval developed by using the standard error of the test statistic which may include the value of parameter with a certain degree of confidence is called confidence interval.

6. **Define chi square distribution.**
   A distribution of square of standard normal variate is called chi square distribution with one degree of freedom (df).

7. **What is degrees of freedom?**
   Ans.: The number of independent terms of a statistic is called degrees of freedom. As the number of restrictions increases the degrees of freedom decreases.

8. State mean and variance of chi square distribution with n degrees of freedom.

Ans.: mean = n and variance = 2n.

9. State the applications of chi square distribution.

Ans.:(i)To test goodness of fit (ii) To test the independency of attributes (iii) To test the significance of variance.

10. What is the test statistic used in testing of independence of attributes?

Ans.: $\chi^2 = \sum_i \frac{(O_i - E_i)^2}{E_i}$, where O_i is observed frequency of the i-th cell and E_i is expected frequency of the i-th cell.