**Chapter 6 Parametric hypothesis testing – MCQ Student**

1. Rejection of the null hypothesis is a conclusive proof that the alternative hypothesis is
   1. True
   2. False
   3. Neither

The correct answer is c.

Support comment: The rejection of the null hypothesis in favour of the alternative hypothesis cannot be taken as conclusive proof that the alternative hypothesis is true, but rather as a piece of evidence that increases one's belief in the truth of the alternative hypothesis.

1. Parametric test, unlike the non-parametric tests, make certain assumptions about
   1. The population size
   2. The underlying distribution
   3. The sample size

The correct answer is b.

Support comment: Parametric methods make assumptions about the underlying distribution from which sample populations are selected. Nonparametric methods make no assumptions about the sample population distribution. Parametric statistical tests assume that your data is approximately normally distributed (follows a classic bell-shaped curve) and that the data is at the interval/ratio level of measurement.

1. The level of significance can be viewed as the amount of risk that an analyst will accept when making a decision
   1. True
   2. False

The correct answer is a.

Support comment: If level of significance is, for example 0.05, then this means that 5% of the cases might be randomly generated and that an analysis is certain that 95% of the cases comply with the hypothesis. In this respect, the level of significance can be viewed as the risk factor.

1. By taking a level of significance of 5% it is the same as saying
   1. We are 5% confident the results have not occurred by chance
   2. We are 95% confident that the results have not occurred by chance
   3. We are 95% confident that the results have occurred by chance

The correct answer is b.

Support comment: If an analyst states that the results are significant at the 5% level then what they are saying is that there is a 5% probability that the sample data values collected have occurred by chance. An alternative view is to use the concept of a confidence interval. In this case we can observe that we are 95% confident that the results have not occurred by chance.

1. Two types of errors associated with hypothesis testing are Type I and Type II. Type II error is committed when
   1. We reject the null hypothesis whilst the alternative hypothesis is true
   2. We reject a null hypothesis when it is true
   3. We accept a null hypothesis when it is not true

The correct answer is c.

Support comment: Type I error means that the null hypothesis that was true has been rejected. The type II error is opposite, i.e. the false null hypothesis that should have been rejected has in fact been accepted in favour of the alternative hypothesis that is true.

1. Type I error means
   1. We reject H0 when H0 is true
   2. We accept H0 when H0 is false
   3. We fail to reject H0 when H1 is false

The correct answer is a.

Support comment:

1. Type II error means
   1. We fail to reject H0 when H0 is true
   2. We reject H0 when H0 is true
   3. We fail to reject H0 when H0 is false

The correct answer is c.

Support comment: