

國立交通大學 104 學年度碩士班考試入學試題

科目：統計學(5021)

考試日期：104 年 2 月 6 日 第 1 節

系所班別：經營管理研究所 組別：經管所

第 / 頁, 共 / 頁

【可使用計算機】*作答前請先核對試題、答案卷(試卷)與准考證之所組別與考科是否相符!!

注意事項：

- 本試卷共 10 題，每題配分 10 分，總分 100 分。請依題目順序作答。
- 答案中特殊符號之意義須說明清楚。

1. Define the conditional expectation and the conditional variance.
2. Define the sampling distribution and give an example.
3. State the Bernoulli distribution and give an application.
4. State the central limit theorem and give an application.
5. State the method of maximum likelihood and give an application.
6. Give the difference between the independent-sample t-test and the paired t-test.
7. State how to test the null hypothesis that there is no linear relationship between two random variables.
8. Give the differences between the test of independence and the test of homogeneity in two-way contingency tables.
9. State the Neyman-Pearson theorem and give an application.
10. State the factorization theorem and give an application.