

大葉大學九十四學年度碩士班甄試試題紙

| 所別 | 組別 | 考試科目 (中文名稱) | 考試日期 | 考試時間 | 備註 |
|-----|----|----------------|--------|--------------|---------------|
| 休閒系 | | 統計學 | 12月13日 | 9:00 ~ 10:30 | 可帶不可程式 計算機 |

註：備註欄若未註明可攜帶計算機或其他輔助工具作答時，考生一律不准攜帶。 ，共 2 頁

一、解釋名詞（英文名詞僅列出中文翻譯而未解釋者，計 1 分）(40%)

- | | | | |
|----------|-----------------|----------------------|---------------|
| 1. 中位數 | 2. 信賴區間 | 3. Reliability | 4. Validity |
| 5. ANOVA | 6. Type I Error | 7. Significant Level | 8. Regression |

二、計算與簡答題(60%)

1. 某班男女合班，女生 18 人的數學平均成績為 83 分，標準差 5 分；男生 22 人平均成績為 85 分，標準差 7 分，試求全班 40 人的平均成績及標準差。(15%)
2. 於統計資料收集上，可區分為哪四種尺度類別，並分別說明各種尺度之特性。(15%)
3. 依據前題之四種尺度類別特性，試說明卡方檢定、t 檢定、ANOVA、皮爾森積差相關、線性迴歸等五種統計分析方法適用之情況。(15%)
4. The data set below contains information about a random sample of 15 individuals in an aerobics workout class at Northwest Athletic Club. You have been asked to determine if there is a significant difference in the mean age of men and women members of the club, and you have decided to do this using one-way ANOVA. You want to use an ANOVA to compare men's and women's ages using the data in below table. To do an F test on the mean ages of men and women for a significance level of 5%, what is the F statistic?(15%)

Northwest Athletic Club Membership Data

| Age of Member | M/F | Number of Children | Member in Swimming Class? |
|---------------|-----|--------------------|---------------------------|
| 34 | F | 2 | Y |
| 39 | F | 1 | N |
| 35 | F | 1 | N |
| 25 | M | 0 | N |
| 20 | M | 0 | Y |
| 37 | F | 2 | Y |
| 15 | M | 0 | N |
| 22 | M | 0 | Y |
| 28 | F | 1 | N |
| 25 | F | 2 | Y |
| 33 | M | 3 | Y |
| 31 | M | 0 | N |
| 19 | F | 0 | Y |
| 29 | M | 1 | Y |
| 27 | F | 2 | N |

| For Age of Members | n | Average | Std. Dev |
|--------------------|----|---------|----------|
| Men | 7 | 25.000 | 6.4550 |
| Women | 8 | 30.500 | 6.8452 |
| Total | 15 | | |
| Grand Average | | 27.9333 | |

| | SS | df | variability |
|----------------|----------|----|-------------|
| Between Groups | 112.9333 | 1 | 112.9333 |
| Within Groups | 578 | 13 | 44.4615 |
| Total | 690.9333 | 14 | |