(107)輔仁大學碩士班招生考試試題	考試日期：107 年 3 月 9 日第一節
	本試題共 1 頁 (本頁為第 1 頁)

科目： 心理學研究法　系所組： 心理學系應用心理學組

問答題：每題 20 分

1. 請問用個人經驗來推論心智運作，有什麼問題？

2. 請介紹一個心理學研究會使用到的儀器設備 （電腦除外），並說明這個設備是利用什麼原理來幫助我們了解人類的心智運作

3. 有一個研究者想要了解年齡與性別是否會影響被詐騙的機率，結果他發現年齡與性別之間有交互作用。請畫一張符合這個結果的長條圖

4. 請說明用問卷來做心理學研究，有哪些優點、缺點？

5. 請問一般在網路上收集的問卷資料，有什麼取樣上的問題？該怎麼改善？

※ 注意：1.考生須在「彌封答案卷」上作答。
2.本試題紙空白部份可當稿紙使用。
3.考生於作答時可否使用計算機、法典、字典或其他資料或工具，以簡章之規定為準。

(107)輔仁大學碩士班招生考試試題	考試日期：107 年 3 月 9 日第 2 節
	本試題共 2 頁 (本頁為第 1 頁)

科目： 統計學 系所組：心理學系

一、一份針對待業者提供不同目標工作坊訓練：學習目標（learning goal）與表現目標（performance goal），及其對於求職意圖（job search intention）與求職行為(job search behavior)影響的研究，結果如下表所示，請試著回答以下問題（50%）

1)針對求職意圖而言，根據表中進行模式一（Step1）與模式二（Step2）之比較，有那些重要發現？請以表中提供的資訊，說明你所得知的研究結果。

2)就求職行為來看，三個模型（Step1, Step2, Step3）的比較結果，有何重要發現？請以表中所列數據資訊，說明研究結果。

資料來源： van Hooft, E. A. J. & Noordzij, G. (2009). The Effects of Goal Orientation on Job Search and Unemployment: A Field Experiment Among Unemployed Job Seekers. Journal of Applied Psychology, 94(6), 1581-1590.

Regression Analyses Examining the Effects of the Workshops on Job Search Intention and Job Search Behavior

	T1 job search intention (β)		T2 job search behavior (β)		
Predictor	Step 1	Step 2	Step 1	Step 2	Step 3
Step 1: Covariates					
Sex[a]	.06	.05	−.02	−.05	−.06
Trait learning goal orientation	−.13*	−.14*	.02	.00	−.02
Trait performance goal orientation	.16**	.19**	.00	.00	−.03
Time 0 job search intention	.86**	.85**			
Time 0 job search behavior			.70**	.70**	.56**
Step 2: Training conditions					
Learning goal condition[b]		.14*		.19*	.17†
Performance goal condition[c]		.03		.12	.12
Step 3: Mediator variable					
Time 1 job search intention					.22*
Multiple R	.85**	.86**	.70**	.72**	.74**
ΔR^2		.02†		.03†	.02*
Adjusted R^2	.71	.73	.47	.49	.51

Note. Because of incidental missing values, N is 108 for job search intention and 86 for job search behavior. [a] 0 = *male*, 1 = *female*. [b] Dummy variable with 0 = *performance goal or control workshop*, 1 = *learning goal workshop*. [c] Dummy variable with 0 = *learning goal or control workshop*, 1 = *performance goal workshop*. † $p < .10$. * $p < .05$. ** $p < .01$.

二、試說明統計假設的檢定程序及意涵。(20%)

三、Steven Goodman 曾在他的文章中提出有關於 p 值的迷思（參見下表），也有不少學者（如：Blakeley B Mcshane & Andrew Gelman、George Cobb）提出應該放棄以統計顯著性（p 值）作為研究結果判準的作法，對此，美國統計學會(American Statistical Association)也提出了六個準則來避免 p 值誤用（參見以下 Ron Wasserstein 的摘述）。請問：對於 p 值的迷思與誤用的討論，你有何看法？科學報導除了 p 值外，你認為還可以加入什麼資訊，來協助閱讀者判斷研究效果？（30%）

1	*If P = .05, the null hypothesis has only a 5% chance of being true.*
2	*A nonsignificant difference (eg, P ≥.05) means there is no difference between groups.*
3	*A statistically significant finding is clinically important.*
4	*Studies with P values on opposite sides of .05 are conflicting.*
5	*Studies with the same P value provide the same evidence against the null hypothesis.*
6	*P = .05 means that we have observed data that would occur only 5% of the time under the null hypothesis.*
7	*P = .05 and P ≤.05 mean the same thing.*
8	*P values are properly written as inequalities (eg, "P ≤.02" when P = .015)*
9	*P = .05 means that if you reject the null hypothesis, the probability of a type I error is only 5%.*
10	*With a P = .05 threshold for significance, the chance of a type I error will be 5%.*
11	*You should use a one-sided P value when you don't care about a result in one direction, or a difference in that direction is impossible.*
12	*A scientific conclusion or treatment policy should be based on whether or not the P value is significant.*

資料來源：Goodman, S. (2008). A Dirty Dozen: Twelve P-Value Misconception. http://www.perfendo.org/docs/BayesProbability/twelvePvaluemisconceptions.pdf.

1. *P-values can indicate how incompatible the data are with a specified statistical model.*
2. *P-values do not measure the probability that the studied hypothesis is true, or the probability that the data were produced by random chance alone.*
3. *Scientific conclusions and business or policy decisions should not be based only on whether a p-value passes a specific threshold.*
4. *Proper inference requires full reporting and transparency.*
5. *A p-value, or statistical significance, does not measure the size of an effect or the importance of a result.*
6. *By itself, a p-value does not provide a good measure of evidence regarding a model or hypothesis.*

資料來源：Wasserstein, R. L. & Lazar, N. A. (2016). The ASA' s Statement on p-Values: Context, Process, and Purpose. The American Statistician, 70(2), 129-133.