

# 長庚大學108學年度研究所碩士班招生考試試題

系所：職能治療學系行為科學碩士班  
臨床心理學組

考試科目：心理學方法

注意：請詳細閱讀下列試題，並請標明題號依試題順序將答案書寫於答案卷上。

本試題共3頁：第1頁

第一部分 (若涉及計算，請寫出算式歷程) (60分)

1. Suppose we had a die with three black sides, two red sides, and one white side. If we roll this die 6 times, what is the probability of obtaining 3 black, 1 red and 2 white? (10分)
2. If one study examine the intervention effect for the Low-birthweight infants (LBW). One LBW group whose mother received a training program (Trainig Group;  $n=15$ ), the other LBW group whose mother did not receive any training program (Control Group,  $n=20$ ). The depedent variable is the Cognitive Development Score (CDS). If Mean and Standard deviation for Trainig Group were 115 and 30, and for Control group were 95 and 20, please interpret this result. (10分)
3. Assume one study examining the association between gender and smoking behavior. If the data is following

	Smoking behavior	
	smoking	No smoking
Male	60	40
Female	750	150

- a. Please interpret this result. (5分)
  - b. If you found that female has more tendency than male to do a smoking behavior based on this research, please comment on the validity of this result. (5分)
4. For the multiple comparisons among treatment means (if the number of treatment is 5 in this experiment) in post hoc,
    - a. Why we have to consider the type I error in the multiple comparisons for post hoc? And how to control the type I error in the post hoc comparisons?(10分)
    - b. In this experiment, please design an orthogonal contrast.(5分)
  5. The validity coefficient for the Adult Intelligence Test (AIT, the X variable) for predicting the freshman's first exam score (the Y variable) is  $r_{XY} = .70$ . Here are the Means and SDs for the variable X ( $X_{Mean} = 40$ ;  $X_{SD} = 10$ ) and Y ( $Y_{Mean} = 4.00$ ;  $Y_{SD} = .5$ )
    - a. What is the predicted the first exam score (Y score) for an AIT score of 50? (5

# 長庚大學108學年度研究所碩士班招生考試試題

系所：職能治療學系行為科學碩士班

考試科目：心理學方法

臨床心理學組

注意：請詳細閱讀下列試題，並請標明題號依試題順序將答案書寫於答案卷上。

本試題共3頁：第2頁

分)

- b. What is the standard error of estimate for these data? (5 分)
- c. For a person with an AIT score of 35, what is the probability of attaining a Y score below 2? (5 分)

## 第二部分 問答題 (40 分)

1. 測驗偏差(test bias) 是在測驗效度中需要被考量的議題。
  - (a) 請簡述何謂測驗偏差 (test bias) (4 分)
  - (b) 請舉例何謂 intercept bias (3 分)
  - (c) 請舉例何謂 slope bias (3 分)
2. 請設計某一個臨床疾病的 case-control 研究，其研究目的是想檢驗某依變項 (Y)(依變項可能是症狀嚴重度，或是認知能力的表現)是被某一自變項(A)所影響。請說明如何設計這樣的研究，在怎樣的情況下可以支持這樣的研究假設。(10 分)
3. 請問當你在編製一個新的問卷或是測驗時，你會用哪些方式檢驗這個新問卷的效度?請舉例說明? (10 分)
4. 請問在怎樣的情況下可以考慮使用單一個案研究法?要如何設計與執行?有那些因素會干擾研究結果的推論? (10 分)

# 長庚大學108學年度研究所碩士班招生考試試題

系所：職能治療學系行為科學碩士班

考試科目：心理學方法

臨床心理學組

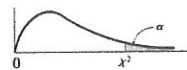
注意：請詳細閱讀下列試題，並請標明題號依試題順序將答案書寫於答案卷上。

本試題共3頁：第3頁

672

APPENDICES

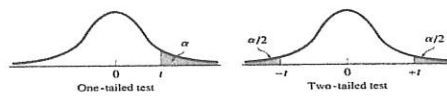
## APPENDIX $\chi^2$ : UPPER PERCENTAGE POINTS OF THE $\chi^2$ DISTRIBUTION



df	.995	.990	.975	.950	.900	.750	.500	.250	.100	.050	.025	.010
1	0.00	0.00	0.00	0.00	0.02	0.10	0.45	1.32	2.71	3.84	5.02	6.63
2	0.01	0.02	0.05	0.10	0.21	0.58	1.39	2.77	4.61	5.99	7.38	9.21
3	0.07	0.11	0.22	0.35	0.58	1.21	2.37	4.11	6.25	7.82	9.35	11.35
4	0.21	0.30	0.48	0.71	1.06	1.92	3.36	5.39	7.78	9.49	11.14	13.28
5	0.41	0.55	0.83	1.15	1.61	2.67	4.35	6.63	9.24	11.07	12.83	15.09
6	0.68	0.87	1.24	1.64	2.20	3.45	5.35	7.84	10.64	12.59	14.45	16.81
7	0.99	1.24	1.69	2.17	2.83	4.25	6.35	9.04	12.02	14.07	16.01	18.48
8	1.34	1.65	2.18	2.73	3.49	5.07	7.34	10.22	13.36	15.51	17.54	20.09
9	1.73	2.09	2.70	3.33	4.17	5.90	8.34	11.39	14.68	16.92	19.02	21.66
10	2.15	2.56	3.25	3.94	4.87	6.74	9.34	12.55	15.99	18.31	20.48	23.21
11	2.60	3.05	3.82	4.57	5.58	7.58	10.34	13.70	17.28	19.68	21.92	24.72
12	3.07	3.57	4.40	5.23	6.30	8.44	11.34	14.83	18.55	21.03	23.34	26.21
13	3.56	4.11	5.01	5.89	7.04	9.30	12.34	15.98	19.81	22.36	24.74	27.69
14	4.07	4.66	5.63	6.57	7.79	10.17	13.34	17.12	21.06	23.69	26.12	29.14
15	4.60	5.23	6.26	7.26	8.55	11.04	14.34	18.25	22.31	25.00	27.49	30.58
16	5.14	5.81	6.91	7.96	9.31	11.91	15.34	19.37	23.54	26.30	28.85	32.00
17	5.70	6.41	7.56	8.67	10.09	12.79	16.34	20.49	24.77	27.59	30.19	33.41
18	6.26	7.01	8.23	9.39	10.86	13.68	17.34	21.60	25.99	28.87	31.53	34.81
19	6.84	7.63	8.91	10.12	11.65	14.56	18.34	22.72	27.20	30.14	32.85	36.19
20	7.43	8.26	9.59	10.85	12.44	15.45	19.34	23.83	28.41	31.41	34.17	37.56
21	8.03	8.90	10.28	11.59	13.24	16.34	20.34	24.93	29.62	32.67	35.48	38.93
22	8.64	9.54	10.98	12.34	14.04	17.24	21.34	26.04	30.81	33.93	36.78	40.29
23	9.26	10.19	11.69	13.09	14.85	18.14	22.34	27.14	32.01	35.17	38.08	41.64
24	9.88	10.86	12.40	13.85	15.66	19.04	23.34	28.24	33.20	36.42	39.37	42.98
25	10.52	11.52	13.12	14.61	16.47	19.94	24.34	29.34	34.38	37.65	40.65	44.32
26	11.16	12.20	13.84	15.38	17.29	20.84	25.34	30.43	35.56	38.89	41.92	45.64
27	11.80	12.88	14.57	16.15	18.11	21.75	26.34	31.53	36.74	40.11	43.20	46.96
28	12.46	13.56	15.31	16.93	18.94	22.66	27.34	32.62	37.92	41.34	44.46	48.28
29	13.12	14.26	16.05	17.71	19.77	23.57	28.34	33.71	39.09	42.56	45.72	49.59
30	13.78	14.95	16.79	18.49	20.60	24.48	29.34	34.80	40.26	43.77	46.98	50.89
40	20.67	22.14	24.42	26.51	29.06	33.67	39.34	45.61	51.80	55.75	59.34	63.71
50	27.96	29.68	32.35	34.76	37.69	42.95	49.34	56.33	63.16	67.50	71.42	76.17
60	35.50	37.46	40.47	43.19	46.46	52.30	59.34	66.98	74.39	79.08	83.30	88.40
70	43.25	45.42	48.75	51.74	55.33	61.70	69.34	77.57	85.52	90.53	95.03	100.44
80	51.14	53.52	57.15	60.39	64.28	71.15	79.34	88.13	96.57	101.88	106.63	112.34
90	59.17	61.74	65.64	69.13	73.29	80.63	89.33	98.65	107.56	113.14	118.14	124.13
100	67.30	70.05	74.22	77.93	82.36	90.14	99.33	109.14	118.49	124.34	129.56	135.82

Source: The entries in this table were computed by the author.

## APPENDIX $t$ : PERCENTAGE POINTS OF THE $t$ DISTRIBUTION



df	Level of Significance for One-Tailed Test						
	.25	.20	.15	.10	.05	.025	.01
1	1.000	1.376	1.963	3.078	6.314	12.706	31.821
2	0.816	1.061	1.386	1.886	2.920	4.303	6.965
3	0.765	0.978	1.250	1.638	2.353	3.182	4.541
4	0.741	0.941	1.190	1.533	2.132	2.776	3.747
5	0.727	0.920	1.156	1.476	2.015	2.571	3.365
6	0.718	0.906	1.134	1.440	1.943	2.447	3.143
7	0.711	0.896	1.119	1.415	1.895	2.365	2.998
8	0.706	0.889	1.108	1.397	1.860	2.306	2.896
9	0.703	0.883	1.100	1.383	1.833	2.262	2.821
10	0.700	0.879	1.093	1.372	1.812	2.228	2.764
11	0.697	0.876	1.088	1.363	1.796	2.201	2.718
12	0.695	0.873	1.083	1.356	1.782	2.179	2.681
13	0.694	0.870	1.079	1.350	1.771	2.160	2.650
14	0.692	0.868	1.076	1.345	1.761	2.145	2.624
15	0.691	0.866	1.074	1.341	1.753	2.131	2.602
16	0.690	0.865	1.071	1.337	1.746	2.120	2.583
17	0.689	0.863	1.069	1.333	1.740	2.110	2.567
18	0.688	0.862	1.067	1.330	1.734	2.101	2.552
19	0.688	0.861	1.066	1.328	1.729	2.093	2.539
20	0.687	0.860	1.064	1.325	1.725	2.086	2.528
21	0.686	0.859	1.063	1.323	1.721	2.080	2.518
22	0.686	0.858	1.061	1.321	1.717	2.074	2.508
23	0.685	0.858	1.060	1.319	1.714	2.069	2.500
24	0.685	0.857	1.059	1.318	1.711	2.064	2.492
25	0.684	0.856	1.058	1.316	1.708	2.060	2.485
26	0.684	0.856	1.058	1.315	1.706	2.056	2.479
27	0.684	0.855	1.057	1.314	1.703	2.052	2.473
28	0.683	0.855	1.056	1.313	1.701	2.048	2.467
29	0.683	0.854	1.055	1.311	1.699	2.045	2.462
30	0.683	0.854	1.055	1.310	1.697	2.042	2.457
40	0.681	0.851	1.050	1.303	1.684	2.021	2.423
50	0.679	0.849	1.047	1.299	1.676	2.009	2.403
100	0.677	0.845	1.042	1.290	1.660	1.984	2.364
$\infty$	0.674	0.842	1.036	1.282	1.645	1.960	2.326

Source: The entries in this table were computed by the author.