

# 國立中山大學九十一學年度碩士班招生考試試題

科目：英文（教育所碩士班）

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注意：不必抄題，作答時請注意試題題號，將I. 詞彙與II. 閱讀理解的答案寫在答案紙第一頁上「選擇題專用頁」空格中。（於本試題紙上作答、或未按照規定者，不予計分）

I. 詞彙：請從每題的(A)–(D)中選出最適合句中畫線字的答案（單選題，每題2分）（30分）

- I first met Joe two years ago, \_\_\_\_\_ after he was released from prison.  
(A) what (B) when (C) just (D) which
- The ambitious plan not only accelerates the building programs, but also calls for a higher level of local involvement in the construction.  
(A) speeds up (B) hold back (C) disturb (D) satisfy
- Some vitamins are \_\_\_\_\_ if you take into much of them.  
(A) reckless (B) nutritious (C) essential (D) poisonous
- Yellowstone Park is far less \_\_\_\_\_ by the fires that ripped through its forests last year than seemed possible while the inferno raged.  
(A) devastated (B) beautiful (C) removed (D) black
- Moral rules alone cannot keep the order because they are not \_\_\_\_\_.  
(A) punctual (B) permanent (C) precise (D) identical
- The two countries have arrived at a bilateral agreement  
(A) an unequal (B) an equitable (C) a two-sided (D) a partial
- He conceded the fact that they were wrong  
(A) held to, insisted on (B) went along with, agreed to  
(C) stood against, denied (D) covered up, hid
- An artificial Christmas tree stood near the door.  
(A) tall, stretching upward (B) evergreen, keeping its green color  
(C) large, taking up a lot of space (D) not natural, made by people.
- They are renting a \_\_\_\_\_ house.  
(A) furnished (B) finished (C) furnished (D) financed
- The noise of the traffic \_\_\_\_\_ us from hearing what the man said.  
(A) prevented (B) processed (C) predicted (D) presented
- One feels it difficult to breathe at the place of high \_\_\_\_\_.  
(A) height (B) altitude (C) level (D) hill
- Their profits can only be described as excessive.  
(A) unusual (B) reasonable (C) too large (D) moderate
- A man gains in wisdom \_\_\_\_\_ his age.  
(A) for (B) as (C) at (D) with
- Many a book includes a foreword.  
(A) appendix (B) preface (C) glossary (D) table of contents.
- The two companies are going to merge by the end of the year.  
(A) combine (B) change owners (C) dissolve (D) hire new clerks.

## II. 閱讀理解：請從每題的(A)–(D)中選出最合適的答案（單選題，每題3分）（15分）

The ability of falling cats to right themselves in midair and land on their feet has been a source of wonder for ages. Biologists long regarded it as an example of adaptation by natural selection, but for physicists it bordered on the miraculous. Newton's laws of motion assume that the total amount of spin of a body cannot change unless an external torque speeds it up or slows it down. If a cat has no spin when it is released and experiences no external torque, it ought not to be able to twist around as it falls.

In the speed of its execution, the righting of a tumbling cat resembles a magician's trick. The gyrations of the cat in midair are too fast for the human eye to follow, so the process is obscured. Either the eye must be speeded up, or the cat's fall slowed down for the phenomenon to be observed. A century ago the former was accomplished by means of high-speed photography using equipment now available in any pharmacy. But in the nineteenth century the capture on film of a falling cat constituted a scientific experiment.

The experiment was described in a paper presented to the Paris Academy in 1894. Two sequences of twenty photographs each, one from the side and one from behind, show a white cat in the act of righting itself. Grainy and quaint though they are, the photos show that the cat was dropped upside down, with no initial spin, and still landed on its feet. Careful analysis of the photos reveals the secret: As the cat rotates the front of its body clockwise, the rear and tail twist counterclockwise, so that the total spin remains zero, in perfect accord with Newton's laws. Halfway down, the cat pulls in its legs before reversing its twist and then extends them again, with the desired end result. The explanation was that while no body can acquire spin without torque, a flexible one can readily change its orientation, or phase. Cats know this instinctively, but scientists could not be sure how it happened until they increased the speed of their perceptions a thousandfold.

16. What does the passage mainly discuss?
- (A) The explanation of an interesting phenomenon
  - (B) Miracles in modern science
  - (C) Procedures in scientific investigation
  - (D) The differences between biology and physics
17. The word "process" in line 7 refers to
- (A) the righting of a tumbling cat
  - (B) the cat's fall slowed down
  - (C) high-speed photography
  - (D) a scientific experiment
18. Which of the following can be inferred about high-speed photography in the late 1800's?
- (A) It was a relatively new technology.
  - (B) The necessary equipment was easy to obtain.
  - (C) The resulting photographs are difficult to interpret.
  - (D) It was not fast enough to provide new information.

19. According to the passage, a cat is able to right itself in midair because it is

- (A) frightened
- (B) small
- (C) intelligent
- (D) flexible

20. How did scientists increase “the speed of their perceptions a thousandfold”?

- (A) By analyzing photographs
- (B) By observing a white cat in a dark room
- (C) By dropping a cat from a greater height
- (D) By studying Newton’s laws of motion

III. 摘要：請將以下兩篇英文簡譯成中文摘要（不需要逐字翻譯）（每題 15 分）（30 分）

1. Finally, teachers should realize that there is no lack of thoughts for promoting creativity in the classroom. Some suggested ideas are listed below.

- (1) Allow students to design websites based on their desired themes.
- (2) Engage students in thought-inspiring activities like debates on both local and international issues.
- (3) Get students to role play real-life cases or problems.
- (4) Plan extracurricular activities that involve problem solving tasks like organizing certain school events (inter-school or inter-class competitions, exhibitions, carnivals, fund-raising and charity projects, etc.).
- (5) Encourage students to share their interests in class by getting them to talk or write about their hobbies, reading habits, outside and family experiences. This can improve their knowledge of each other and help set the tone for group work which can inculcate group effort in generating ideas and sharing risks.
- (6) Reward class participation and creative answers with points or words of encouragement.

2. Marxist scholarship in comparative education has been motivated by the view that, under capitalism, education systems function largely to serve the interests of the ruling class, thereby substantially disenfranchising the working class. Scholars such as Carnoy (1974), Altbach and Kelly (1984) and Arnove (1980, 1982) have developed analyses of education which have often turned on questions of the role of colonial powers and/or first world philanthropic organizations in perpetuating inequities within the Third World, and between the developed and developing nations, while Sharp, and Bowles & Gintis have largely focused on first world examples. The former group have revealed some of the ways whereby in post-colonial contexts, forms of development aid often do little to advance the interests of the masses for whom they are

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supposedly designed, while patterns of schooling modeled closely on Western lines help perpetuate indigenous elites with interests more in common with elites in 'core' advanced capitalist states. The latter group by contrast have often been regarded as adopting a reductionist, positivist and deterministic Marxim to inform their analyses. This has sometimes been seen as mitigating against a proper account of the role of culture and cultural differences in explaining educational outcomes (Welch, 1988; Cole, 1988).

#### IV. 英文作文 (25 分)

題目：Who am I?

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科目：教育學（教育研究所碩士班）

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請注意：申論題每題 20 分，解釋名詞每項 5 分。

- 一、請就教學創新九年一貫的理念，申論國民教育有關事實教學及價值教學之具體作法。
- 二、「融合教育」是目前身心障礙兒童教育的潮流，但在作法上由於「融合」的程度不同，而可以分成四個等級。請解釋「融合教育」的意涵，並請列出「融合教育」的四個等級並簡述之。
- 三、請闡述「學校本位課程發展」的目的與方法，並說明如何依據九年一貫課程來發展學校本位課程。
- 四、近年來國內大學合併或策略聯盟的呼籲日盛，請舉出世界上哪些先進國家曾經或企圖採取此一作法以提升高等教育的素質，並說明其緣由、作法與成效。
- 五、解釋名詞：
  1. 「個別化教學方案」(IEP)
  2. 高中職社區化
  3. 美國的 ESEA 法案
  4. 英國的 GCE-A level 考試

# 國立中山大學九十一學年度碩士班招生考試試題

科目：教育心理學 (教育研究所碩士班)

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## 一、申論題 (75 分)

1. 試從訊息處理理論的觀點比較分析生手教師與專家教師的異同點。(25 分)

2. 何謂創造力？創造力可以如何增進？如何評量？(25 分)

3. 甲：「記憶實驗告訴我們人的短期記憶為 7 個字組 (chunks)。」

乙：「若一秒鐘呈現一個個位數字，有受訓的人可以正確地把看過的一百個數字記下來。」

以上兩句話有衝突嗎？請你先用具體例子或閱讀資料解釋甲與乙所說的兩句話，再說明這兩句話是否有衝突。(25 分)

## 二、解釋名詞 (25 分)

1. direct instruction
2. artificial intelligence (AI)
3. Hawthorne effect
4. ceiling effect vs. floor effect
5. overjustification

# 國立中山大學九十一學年度碩士班招生考試試題

科目：教育研究法(含測驗·統計)

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注意：不必抄題，作答時請注意試題題號，「第一大題選擇題」請將答案寫在答案紙首頁「選擇題專用頁」之對應空格中；解釋名詞與問答題，請由答案紙之次頁開始依序作答。(於本試題紙上作答，或未按照規定者，不予計分)

一、選擇題：(每題 2 分，共 30 分，第 3 題為複選，其餘皆單選題)

- 當某群體的得分呈負偏態分布時，平均數、眾數、中位數之大小關係為何？  
(A) 中位數 > 眾數 > 平均數 (B) 眾數 > 中位數 > 平均數  
(C) 平均數 > 中位數 > 眾數 (D) 眾數 > 平均數 > 中位數 (E) 平均數 > 眾數 > 中位數
- 在常態分配下，下列那個相對地位的分數最高？  
(A) 比西  $DIQ=130$  (B)  $z=2$  ( $\mu=0, \sigma=1$ )  
(C)  $T=68$  ( $\mu=50, \sigma=10$ ) (D)  $PR=90$  (E) 10 人中的第 1 名
- 下列哪些統計數不受量尺所使用的單位(例如，公分或公尺)之影響？(本題複選)  
(A) 離均差平方和 (B) 共變數 (C) 相關係數 (D) 變異數 (E) 標準化迴歸係數
- 研究者先入為主的印象，導致觀察時對行為特質的評定形成偏差，是屬於：  
(A) 強亨利效應 (B) 月暈效應 (C) 霍桑效應 (D) 比馬龍效應
- 某群體的變異數為 10，如將每位受試的得分各乘以 3，那該群體的變異數變為  
(A) 10 (B) 30 (C) 60 (D) 90 (E) 120
- 某教師出了 3 個題目，全部都是五選一的選擇題，如果隨機猜測，那全部猜對的概率是多少？ (A) 1/5 (B) 3/5 (C) 1/25 (D) 1/125 (E) 3/125
- A 與 B 的相關是 0.30， $C=3A$ ， $D=3B$ 。那 C 與 D 的相關是多少？  
(A) 0.10 (B) 0.30 (C) 0.60 (D) 0.90 (E) 1.00
- 某測驗原有 20 題，其信度是 0.50，如果其題數增加至 60 題，那該測驗之信度預期為多少？ (A) 0.30 (B) 0.50 (C) 0.60 (D) 0.75 (E) 0.90
- 已知 X 與 Y 的共變數是 10，X 及 Y 的標準差分別為 5 及 8，那 X 與 Y 的相關是  
(A) 0.25 (B) 0.30 (C) 0.60 (D) 0.75 (E) 0.90
- 某測驗觀察分數及誤差分數的變異數分別是 150 及 30，那該測驗的信度是多少？  
(A) 0.25 (B) 0.50 (C) 0.60 (D) 0.75 (E) 0.80
- 已知某智力測驗 IQ 分數的標準差是 20，其信度為 0.91，那該測驗 IQ 分數的測量標準誤是多少？ (A) 2 (B) 4 (C) 6 (D) 8 (E) 9
- 某班學生有 25 人，那該班成績最高的學生，其百分等級是多少？  
(A) 100 (B) 99 (C) 98 (D) 96 (E) 95
- 在實驗研究中，下列何者係影響外在效度的因素  
(A) 同時事件 (B) 統計迴歸 (C) 熟悉測驗內容  
(D) 實驗安排的反作用效果 (E) 實驗過程中的傷亡問題

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科目：教育研究法(含測驗、統計)

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14. 研究者想比較城鄉地區教師，其對九年一貫課程實施的贊同程度之差異情形，最適合採下列何種統計方式？(A)卡方考驗 (B)t考驗 (C)變異數分析 (D)多變項分析
15. 為使實驗的效果，容易達到統計上的顯著差異水準，則宜使誤差變異量：  
(A) 越大越好 (B) 越小越好 (C) 隨機處理 (D) 控制個別差異的因素

## 二、解釋名詞 (每題 4 分，共 20 分) 將下列名詞譯成中文並解釋之

1. Nonparametric statistics
2. Solomon four-group design
3. Statistical regression effect
4. Focus group
5. Theoretical saturation

## 三、問答題 (第 1 題 12 分，第 2、3 大題 19 分，共 50 分)

1. 試述良好測驗的主要特徵？
2. 試說明紮根理論 (grounded theory) 研究方法的涵義與資料蒐集、分析的相關技術。
3. 試申論一份好的質性研究報告的相關準則？