

國立臺中教育大學九十七學年度研究所碩士班

(含在職進修專班)招生考試

英文試題

適用學系：數位內容科技學系

一、克漏字選擇：Select the best choice for each item (60%)

The new interactive technologies of communication, especially the Internet, offer a rapid 1 of communication with other individuals 2 may be spatially distant. The cost of communication across distance is almost completely removed. 3, these new technologies may allow relatively unlike individuals to interact, such as the homed and homeless people in a community, who would 4 not be in communication with one another. For many individuals who use the Internet, this communication technology is 5 in cost.

1. () (a) mean (b) means (c) meaning (d) meanings
2. () (a) which (b) who (c) whose (d) whom
3. () (a) Further (b) Farther (c) Ever (d) More
4. () (a) otherwise (b) relevant (c) related (d) likewise
5. () (a) none free nor very cheap (b) no free nor very cheap (c) neither free nor very cheap (d) either free or very cheap

Technology is a catalyst for a changing world. It is a world increasingly 6 by interactive media, global systems of communication and instantaneous 7 to information. How we respond to this changing world as teachers and leaders may define how well society 8 the challenges of the 21st century and 9. Never before 10 journalism and mediated communication been more central to civil society.

6. () (a) shape (b) shapes (c) shaped (d) been shaped
7. () (a) act (b) action (c) active (d) access

8. () (a) copes (b) copes to (c) copes with (d) copes at
9. () (a) beyond (b) yonder (c) ago (d) since
10. () (a) do (b) does (c) has (d) have

At a beach in southern France, a little boy, obviously sent by his parents, 11 Picasso with 12 and begged the artist for a small, autographed drawing. Picasso thought for a moment, 13 tore up the paper, took some color crayons, drew designs on the boy's chest and back, signed his "work" and sent the 14 back to his parents. "I wonder," said the artist 15 mischievous smile, "if they'll ever wash him again."

11. () (a) approach (b) approaches (c) approaching (d) approached
12. () (a) a thread of paper (b) a sheet of paper (c) a lock of paper (d) a tin of paper
13. () (a) but (b) while (c) then (d) though
14. () (a) youngster (b) adult (c) man (d) baby
15. () (a) with (b) on (c) all (d) very

The refrain is an important component in songs and poems. By repeating a part of a song or a poem, the songs and poems make themselves memorable to their audiences, and sometimes convey messages to the audiences. It is 16 possible that they do not relay any messages, because they are merely there to provide 17, or to add to the appeal of the story or poem. The Christmas song of *We Wish You a Merry Christmas* is an example of this. "We wish you a merry Christmas, we wish you a merry Christmas, we wish you a merry Christmas, and a happy new year. Good tidings we bring to you and your kin: Good tidings for Christmas and a happy new year." This song has a strong refrain that 18 the message that we wish that people could have a happy Christmas, and that this happiness could 19 into the New Year. The refrain is 20 several times, which makes this Christmas song memorable and fun.

16. () (a) long (b) highly (c) seldom (d) scarcely
17. () (a) enter (b) entertain (c) entertaining (d) entertainment
18. () (a) transmit (b) transmits (c) transmitting (d) transferring
19. () (a) last (b) letter (c) latter (d) shorten
20. () (a) repeat (b) repeated (c) repeating (d) repetition

二、英翻中：Translate the following passage into Chinese (20%)

The modern phrase “giving him the cold shoulder” actually dates back to a time when knighthood was in flower. A wandering knight would be received at any castle with a sumptuous hot meal. The common traveler, however, was a less welcome guest, and his host would serve him a “cold shoulder” of beef or mutton.

三、中翻英：Translate the following passage into English (20%)

數位學習系統是由學習管理系統、學習內容管理系統、數位內容課程設計、教材製作工具等四個部份所構成。學習管理系統、學習內容管理系統、教材製作工具三者是屬於電腦軟體部分，而數位內容課程設計則著重在如何設計數位課程，包括學習理論、教學、測驗評量、回饋、教材等內涵。

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計算機概論（含資料結構）試題

適用學系：數位內容科技學系

一、選擇題(60%，每題 4%)

- 104 人力銀行網站，是屬於電子商務中哪一種商業模式的分類？
 - (1) 資訊提供者
 - (2) 入口網站
 - (3) 交易中間人
 - (4) 市場提供者
- 下列對於 XML 的描述何者錯誤？
 - (1) 從 SQL 格式擴增而來
 - (2) 提供自定標籤的功能
 - (3) 使用物件的概念，可將網頁組成 DOM 樹的結構
 - (4) 提供 XPath 與 XQuery 的資料存取與查詢
- 為了維護軟體製作的品質，通常工程師會逐一檢視所有的功能是否正常，這稱為：
 - (1) 黑箱測試
 - (2) 白箱測試
 - (3) 標準化測試
 - (4) 由上而下測試
- 以下哪一個屬於軟體開發的生命週期模型？
 - (1) 編碼式模型
 - (2) 螺旋式模型
 - (3) 流程式模型
 - (4) 廣域式模型

5. 目前電腦計算儲存容量的最大單位為何？
- (1) GB
 - (2) KB
 - (3) TB
 - (4) MB
6. 若一個程式執行時間是 $10000n^2+n\log n^2$ ，則請說明其時間複雜度為何？
相當於：
- (1) $O(n^2)$,
 - (2) $O(n\log n)$,
 - (3) $O(n^3)$
 - (4) $O(n^2 \times n\log n^2)$
7. 有一堆疊 (stack)，一開始是空的，現有 ABCDE 五個資料依序以 push 指令放入堆疊中，在放入的過程中與結束後，陸續執行了一些 pop 指令，下列何者為不可能的輸出？
- (1) ABCDE
 - (2) EDCBA
 - (3) EABCD
 - (4) ABDEC
8. 以 array 及 Linked list 方式實做 queue 之敘述，下何者不正確？
- (1) array 方式在處理上受其宣告時 array 大小之限制
 - (2) array 方式在儲存相同元素時所用之空間 (memory) 較大
 - (3) Linked list 方式其 queue 之大小較不受限制
 - (4) linked list 方式需要用到指標
9. Kruskal algorithm 在求最小成本擴張樹(minimum cost spanning tree)是屬於哪一種方法？
- (1) Greedy method
 - (2) Backtracking
 - (3) Dynamic Programming
 - (4) Divide-and-Conquer

10. 磁帶算是一種
- (1) 隨機存取記憶體
 - (2) 直接存取記憶體
 - (3) 循序存取記憶體
 - (4) 以上皆非
11. 繁體字的內碼目前一般是使用
- (1) 王安碼
 - (2) 電信碼
 - (3) Big5 碼
 - (4) 零壹碼
12. 試圖把全球重要的文字給一個統一編碼的是
- (1) Unicode
 - (2) EBCDIC
 - (3) ASCII
 - (4) Hamming
13. 編譯器把字元組成代表單一實體的 token 是在
- (1) Lexical phase
 - (2) Semantic phase
 - (3) Syntax phase
 - (4) Code Generation phase
14. 機器週期(machine cycle)中的 instruction decode 是在計算機的哪個單元中完成的？
- (1) 計算單元
 - (2) 控制單元
 - (3) 記憶單元
 - (4) 輸入單元
15. 請問 quick sort 最差情況(worst case)的時間複雜度為
- (1) $O(n)$
 - (2) $O(n \log n)$
 - (3) $O(n \log^2 n)$
 - (4) $O(n^2)$

二、問答題(40%，每題 8%)

1. Translate $(A+B)*D+E/(F+A*D)+C$ to Prefix notation and postfix notation. (8%)

2. 下列氣泡排序 (Bubble sort)，需要比較多少次？(8%)

```
FOR I=1 TO 4
```

```
  FOR J=1 TO 5-I
```

```
    IF A(J) < A(J+1)
```

```
      THEN SWAP A(J), A(J+1)
```

```
  NEXT J, I
```

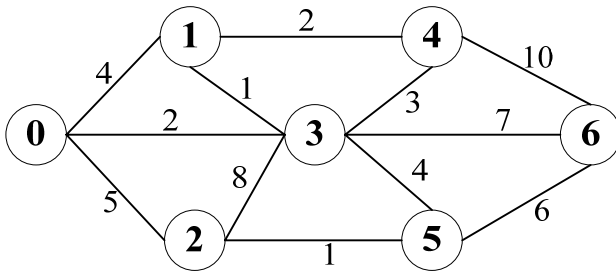
3. 試述結構化系統分析的步驟。(8%)

4. 將下列中序運算式轉換成後序運算式。(8%)

(a) $A + B * C - D - F / G$

(b) $A * (B - C + D / F) + G$

5. 以 Prim 演算法求最小成本擴張樹(minimum-cost spanning tree)。(8%)



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數位藝術與設計試題

適用學系：數位內容科技學系

一、請各解釋 2D、2.5D、3D、4D 及 5D 的名詞定義或其差異。(20%)

以下四題解答請在提供的圖畫紙上完成

二、假設你擁有 PhotoShop、MAYA 及 After Effects 三套軟體，請使用專案流程圖規劃一部短動畫並說明之。(20%)

三、請手繪設計一個數位學習網站「首頁」，須包含文字及圖形。

1.設計美學規劃。(10%)

2.首頁中文字與圖形，請以點陣圖 (Bitmap) 及向量圖 (Vector Image) 兩種方式優缺點輔助說明設計原理。(5%)

3.請用使用性 (Usability) 原則說明首頁特色。(5%)

四、中華棒球隊確定取得奧運參賽代表權，請設計以下指定項目；限使用單色鉛筆作答。

【作答與配分提示】；

1.設計兩款加油臉譜造型。(10%)

2.看台用超大型加油旗幟。(10%)



※參考資料：中華台北奧會會旗

五、請以「太極」為題，創造出兩個富有“設計感”的畫面（尺寸、與直橫式不拘）；
限使用單色鉛筆作答。

【作答與配分提示】

- 1.單色素描：請描繪兩個畫面。（10%）
- 2.解釋你的想法。（10%）