

嘉南藥理大學 103 學年度第二學期轉學生招生及藥學系轉系考試
考試科目(一) 英文試題【四技二、三年級、二技一年級及四技一年級】

本試題共 1 張 2 面

准考證號碼：

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| 注意 事項 | 一、 本試題計 40 題，每題 2.5 分，共 100 分。每題都有(A)(B)(C)(D)四個答案，其中只有一個是正確，請將正確的答案選出，然後在答案卡上同一題號相對位置方格範圍內，用 2B 鉛筆全部塗黑，答對者得題分，答錯與不答者該題以零分計。 二、 請先將本試題准考證號碼方格內，填上自己准考證號碼，考完後將「答案卡」及「試題」一併繳回。 |
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I. Vocabulary and Sentence Structure 字彙和結構 — Choose the best answer for each question 請選出一個最正確答案

1. There is a _____ about an immortal creature that lives in this forest.
(A)civilization (B)reservation (C)legend (D)symptom
2. The students' _____ to learn made the teacher very proud.
(A)bid (B)blaze (C)enthusiasm (D)flames
3. Jennifer was _____ when a traffic jam made her miss her flight to Hawaii.
(A)filthy (B)flourish (C)immature (D)furious
4. Once you _____ all of the requirements of the school, you can graduate.
(A)fulfill (B)abolish (C)reverse (D)liberate
5. Rita _____ sends handwritten letters to her foreign friends, but she usually just sends e-mail.
(A)occasionally (B)revolutionary (C)frequently (D)readily
6. My grandfather is _____, but I still have great memories of him.
(A)decreased (B)deceased (C)depressed (D)acquainted
7. When the patient gained _____ once again, the doctor asked him many questions.
(A)promptness (B)consciousness (C)confession (D)conflict
8. To express my _____ for everything the family had done for me, I sent them some flowers.
(A)demands (B)contempt (C)frustration (D)gratitude
9. The police are trying to find a(n) _____ for the terrible crime.
(A)inspiration (B)motif (C)motion (D)motive
10. The decision to pass the new tax law is still _____.
(A)galloping (B)pending (C)punishing (D)departing
11. People stood under a small _____ while waiting for the bus on a rainy day.
(A)shelter (B)sphere (C)sponsor (D)encounter
12. You will have to _____ to vote when you move to the new state.
(A)register (B)record (C)recognize (D)smash
13. Due to the horrendous weather, the _____ was made to postpone the meeting.
(A)consequence (B)verdict (C)result (D)decision
14. Could you tell Sue Haig that if we _____ the delivery by noon we will have to cancel the order.
(A)will not have received (B)do not receive (C)were not receiving (D)had not received
15. Is this the candidate _____ resume you forwarded to me in an e-mail?
(A)who (B)whom (C)whose (D)which
16. Snacks and drinks will be served, but participants are welcome to bring _____ they like on the field trip.
(A)whatever (B)however (C)wherever (D)forever
17. Technicians employed in the aerospace industry tend to be _____ skilled and very well qualified.
(A)highly (B)tightly (C)wholly (D)nearly
18. In the ten years that the company has been trading, we have _____ an excellent reputation for both quality and customer service. (A)gained (B)granted (C)loaded (D)prospered
19. To avoid any public fears, reports of financial mismanagement need to be dealt _____ quickly.
(A)to (B)with (C)about (D)in

<背面尚有題目>

20. Mr. Larson announced that the construction work was expected to be _____ in the early spring.
 (A)completed (B)completion (C)completes (D)completing

II. Cloze Test 克漏字 — Choose the best answer for each blank 請選出一個最正確答案

Are You a Stressed-Out Student?

- * *Sleep or nap*: Some people are OK with three or four hours of sleep a night, but most people 21. You should try to sleep eight hours a night. If you can't, then take a 22 in the afternoon. You may 23 in on the weekend, but you shouldn't stay in bed all day. Sleeping too long isn't good, either.
- * *Eat and drink right*: Students often gain weight because they eat a lot of 24 and also because they eat late at night. You should also try to drink a liter of water a day – at least – and 25 soda.
- * *Stop and get away*: Sometimes you have to stop what you're doing. 26. Turn off the TV and computer, walk around the room, and breathe deeply. You should do this four or five times a day.
- * *Walk or bike*: Walk as much as you can. Walking is the best way to 27. Or get a bicycle, but remember that 28 a bike can be dangerous. You should always wear a 29 and bright clothes. Never ride without them.
- * *Get 30*: Do you have gym nearby? You should use it. You don't have to exercise every day, but you should do something three times a week.

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| 21. (A)is | (B)are | (C)isn't | (D)aren't |
| 22. (A)napkins | (B)note | (C)nest | (D)nap |
| 23. (A)sleep | (B)jog | (C)run | (D)shop |
| 24. (A)junk food | (B)water | (C)vegetables | (D)jewels |
| 25. (A)have | (B)acquire | (C)avoid | (D)purchase |
| 26. (A)Break your leg | (B)Take a break | (C)Break up | (D)Break even |
| 27. (A)stay in shape | (B)stay awake | (C)stay alive | (D)stay attentive |
| 28. (A)ride | (B)sit | (C)riding | (D)sitting |
| 29. (A)lamp | (B)helmet | (C)planner | (D)receipt |
| 30. (A)exercise | (B)caught | (C)paid | (D)permission |

Deadly Gas Explosion Rips Southern Taiwan Neighborhood

A downtown district of the southern Taiwanese city of Kaohsiung was ripped apart just before midnight Thursday by a series of explosions 31 killed at least 24 people and injured hundreds more, state news agency CNA reported. The 32, which were triggered by underground gas leaks, tore a trench through main roads, 33 cars and trucks and sent flames leaping into the air in the city's Qianzhen district. Witnesses said they saw vehicles flung into the air by the force of the explosions -- one car was found on the roof 34 a three-story building. Zong-Han Li was driving when the explosion happened directly in front of him, and his 35 caught the moment the gas ignited.

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| 31. (A)who | (B)that | (C)where | (D)whose |
| 32. (A)beverages | (B)blasts | (C)bliss | (D)bands |
| 33. (A)overturnd | (B)overturning | (C)overturnd | (D)overturnd |
| 34. (A)on | (B)of | (C)at | (D)by |
| 35. (A)front door | (B)back seat | (C)dashboard camera | (D)seat belt |

Scottish Voters Choose to Remain in United Kingdom

Scotland will remain part of the United Kingdom -- along with England, Wales and Northern Ireland -- following a historic 36 vote. A majority of voters rejected the possibility of Scotland breaking away and becoming an 37 nation. With 31 of 32 councils declared, the "No" campaign has won the referendum on Scottish independence. Scottish First Minister Alex Salmond admitted defeat in Scotland's independence referendum Friday and 38 the rest of Scotland to do the same. In a televised statement, he thanked Scotland "for 1.6 million votes for Scottish independence." A turnout of 86% is one of the highest 39 the democratic world for any such vote, he said. Voters in Scotland made their 40 Thursday -- remain part of the United Kingdom or form their own independent nation. They chose to remain.

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| 36. (A)referendum | (B)reinforce | (C)recitation | (D)retreat |
| 37. (A)independent | (B)identical | (C)indifferent | (D)imperial |
| 38. (A)utensil | (B)upset | (C)urged | (D)urgent |
| 39. (A)on | (B)by | (C)with | (D)in |
| 40. (A)choose | (B)choosing | (C)chosen | (D)choice |

嘉南藥理大學 103 學年度第二學期藥學系轉系考試

考試科目(二) 普通化學及普通生物學試題

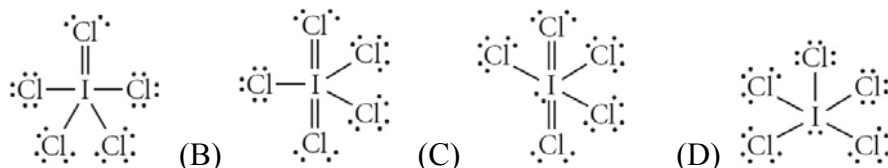
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【甲-普通化學】每題 5 分

1. $[(263.7 - 132) \times 3.162] / 0.6270$ 左側算式答案的有效數字位數有幾位? (A)1 (B)2 (C)3 (D)4
2. 83.28g 的鋰 (Li, atomic weight 6.94 amu) 金屬有多少個鋰原子? (A) 5.90×10^{25} (B) 7.09×10^{21} (C) 7.22×10^{24} (D) 4.27×10^{22} 個
3. 下列何者是亞硫酸 (Sulfurous acid) 與氫氧化鋰 (Lithium hydroxide) 反應的正確平衡反應式? (A) $\text{H}_2\text{SO}_3(\text{aq}) + 2\text{LiOH}(\text{aq}) \rightarrow 2\text{H}_2\text{O}(\text{l}) + \text{Li}_2\text{SO}_3(\text{aq})$ (B) $\text{H}_2\text{S}(\text{aq}) + 2\text{LiOH}(\text{aq}) \rightarrow 2\text{H}_2\text{O}(\text{l}) + \text{Li}_2\text{S}(\text{aq})$ (C) $\text{HSO}_3(\text{aq}) + \text{LiOH}(\text{aq}) \rightarrow \text{H}_2\text{O}(\text{l}) + \text{LiSO}_3(\text{aq})$ (D) $\text{HSO}_4(\text{aq}) + \text{LiOH}(\text{aq}) \rightarrow \text{H}_2\text{O}(\text{l}) + \text{LiSO}_4(\text{aq})$
4. $3\text{NO}_2(\text{g}) + \text{H}_2\text{O}(\text{l}) \rightarrow 2\text{HNO}_3(\text{aq}) + \text{NO}(\text{g})$ 依據左列反應式，需多少克的水才能產生 157.55 g 的 HNO_3 ? 假設有足夠量的 NO_2 參與反應。(分子量: $\text{H}_2\text{O} = 18.02 \text{ g/mol}$, $\text{HNO}_3 = 63.02 \text{ g/mol}$.) (A)38.08 g H_2O (B)43.41 g H_2O (C)22.53 g H_2O (D)10.90 g H_2O
5. Br^- , K^+ , Rb^+ 各粒子半徑由小到大排列為 (A) $\text{K}^+ < \text{Rb}^+ < \text{Br}^-$ (B) $\text{Rb}^+ < \text{K}^+ < \text{Br}^-$ (C) $\text{Rb}^+ < \text{Br}^- < \text{K}^+$ (D) $\text{Br}^- < \text{K}^+ < \text{Rb}^+$
6. Rb_2S 、 K_2O 、 Li_2O 依晶格能 (lattice energy) 由小到大排列為 (A) $\text{Li}_2\text{O} < \text{K}_2\text{O} < \text{Rb}_2\text{S}$ (B) $\text{Li}_2\text{O} < \text{Rb}_2\text{S} < \text{K}_2\text{O}$ (C) $\text{Rb}_2\text{S} < \text{K}_2\text{O} < \text{Li}_2\text{O}$ (D) $\text{Rb}_2\text{S} < \text{Li}_2\text{O} < \text{K}_2\text{O}$
7. P、K、Cs 依電負度 (electronegativity) 由大到小排列為 (A) $\text{K} > \text{Cs} > \text{P}$ (B) $\text{K} > \text{P} > \text{Cs}$ (C) $\text{P} > \text{K} > \text{Cs}$ (D) $\text{Cs} > \text{K} > \text{P}$
8. 選出最強極性的化學鍵 (A)P-F (B)C-Br (C)C-F (D)C-I



9. ICl_5 的最佳路易士結構 (Lewis structure) 為 (A) (B) (C) (D)
10. 在 CH_3^+ 中，C 的形式電荷(formal charge) 為 (A)0 (B)1 (C)-1 (D)2
11. 依 X-A-X 鍵角由小至大排列，其中 A 表示中心原子，X 表示外圍電子 SCl_2 、 CF_4 、 CS_2 (A) $\text{CS}_2 < \text{SCl}_2 < \text{CF}_4$ (B) $\text{SCl}_2 < \text{CF}_4 < \text{CS}_2$ (C) $\text{CF}_4 < \text{CS}_2 < \text{SCl}_2$ (D) $\text{CS}_2 < \text{CF}_4 < \text{SCl}_2$
12. C_4H_6 具有幾個 sigma 鍵及 pi 鍵? (A)9 sigma, 2 pi (B)8 sigma, 0 pi (C)6 sigma, 2 pi (D)10 sigma, 0 pi
13. 依據 VSEPR 模型，以 Br 原子為中心， BrF_4^- 的電子分佈幾何形狀 (electron-domain geometry) 為 (A)八面體形 (octahedral) (B)平面三角形 (trigonal planar) (C)正四面體形 (tetrahedral) (D)三角雙錐形(trigonal bipyramidal)
14. 何種分子間作用力 (intermolecular force) 導致 KCl 溶解於水中? (A)hydrogen bonding (B)dipole-dipole forces (C)dispersion forces (D)ion-dipole force
15. 鋰金屬以體心立方 (body-centered cubic structure) 形成結晶，則每一個原子的配位數 (coordination number) 為 (A)4 (B)12 (C)6 (D)8
16. 620.70 g 乙二醇 (ethylene glycol, $\text{C}_2\text{H}_6\text{O}_2$, molar mass = 62.07 g/mol) 溶於 500.0g 的水中，計算此溶液凝固點 ($K_f = 1.86^\circ\text{C}/\text{m}$ and $K_b = 0.512^\circ\text{C}/\text{m}$.) (A) 30.0°C (B) -37.2°C (C) 8.32°C (D) -8.32°C
17. 20°C 時,重量百分比為 15.0%的氯化銨 (ammonium chloride) 密度為 1.043 g/mL。試計算此溶液的莫耳濃度? (NH_4Cl 式量 53.50 g/mol.) (A)3.92 (B)0.479 (C)2.93 (D)4.79
18. 若溶液中含有 $1.0 \times 10^{-5} \text{ M H}_3\text{O}^+$ (25°C)，試計算 pOH 值? (A)3.00 (B)5.00 (C)10.00 (D)9.00
19. The compound ClF contains (A)polar covalent bonds with partial positive charges on the Cl atoms. (B)nonpolar covalent bonds. (C)polar covalent bonds with partial positive charges on the F atoms. (D)ionic bonds.

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20. What is the hydronium ion concentration of a 0.0350 M hypochlorous acid (HClO) solution with $K_a = 3.5 \times 10^{-8}$? The equation for the dissociation of hypochlorous acid is: $\text{HOCl}(aq) + \text{H}_2\text{O}(l) \rightleftharpoons \text{H}_3\text{O}^+(aq) + \text{OCl}^-(aq)$ (A) 7.0×10^{-4} M (B) 3.5×10^{-5} M (C) 1.7×10^{-5} M (D) 1.4×10^{-4} M

【乙-普通生物學】每題 5 分

21. 下列對於蛋白質激酶 (protein kinase) 的敘述，何者錯誤? (A)它是一種酵素蛋白質 (B)可以活化自己蛋白質的胺基酸 (C)可以把其他蛋白質的胺基酸磷酸化 (phosphorylation) (D)一開始沒有活性，後來被活化才具有活性
22. 針對一個特定的基因去大量製造出完全相同的基因，稱為 (A)gene cloning (B)gene recombination (C)gene translocation (D)gene hybridization
23. 當呼吸作用或光合作用的電子攜帶者 (electron carrier) 攜帶了 2 個電子時，此時 (A)發生了氧化作用 (B)已經釋放出能量 (C)具有較高的位能 (D)使電子攜帶者呈現負電荷狀態
24. 細胞透過內膜系統 (endomembrane system) 可以執行特定的代謝功能或輸送特定物質，下列那一個胞器不屬於內膜系統? (A)內質網 (B)高基氏體 (C)溶小體 (D)粒線體
25. 細胞透過減數分裂的方式，可以產生各種不同遺傳組合的配子，如果染色體沒有發生互換的話，其配子的遺傳特性是在減數分裂的那一個階段被決定了? (A)減數 I 前期 (B)減數 I 中期 (C)減數 II 前期 (D)減數 II 中期
26. 冬天低溫會造成植物細胞膜成分流動緩慢，下列那一個方法可以維持細胞膜的流動性，使細胞正常運作? (A)增加細胞膜飽和性脂肪酸的比例 (B)增加細胞膜膽固醇的比例 (C)增加細胞膜親水性蛋白質的比例 (D)增加主動運輸
27. 發生下列那一種錯誤，有機會可以被校正回來? (A)DNA 的複製 (B)DNA 的轉錄作用 (C)RNA 的轉譯作用 (D)RNA 的反轉錄作用
28. 關於 DNA 聚合酶的特性，何者錯誤? (A)只能把核苷酸加在 3 端 (B)於高溫下仍非常穩定 (C)只能合成 DNA (D)於 DNA 複製時與校正錯誤時均會用到
29. 細胞進行呼吸作用時，那一個步驟需借用別處的 ATP，來提供自己將來合成 ATP 的需要? (A)葡萄糖→G3P (B)G3P→丙酮酸 (C)丙酮酸→乙醯輔酶 A (D)乙醯輔酶 A→檸檬酸
30. 下列那一個現象只會發生在原核生物，但不會發生在真核生物? (A)可以同時進行轉錄作用與轉譯作用 (B)轉譯作用時，會發生多核糖體 (polyribosome) 同時轉譯同一條 mRNA 的現象 (C)同時擁有許多複製起點(origin of replication) (D)複製 DNA 時可以從複製起點進行雙向(both direction)複製
31. 當生物系統的自由能差距 ΔG 如何時，其代謝反應可以自然發生? (A) $\Delta G < 0$ (B) $\Delta G = 0$ (C) $\Delta G > 0$ (D)A 與 C 皆可
32. 調控基因的表現 (gene expression) 可以發生在許多步驟，其中那一個步驟是基因調控最重要的關鍵步驟，若能打開此步驟，則其他步驟相對容易被打開? (A)DNA 的緊密程度 (B)DNA 的轉錄作用 (C)RNA 的修飾作用 (RNA processing) (D)RNA 的轉譯作用
33. 發生下列何種作用時，需要一段 RNA 引子 (primer) 做起頭? (A)DNA 的複製 (B)DNA 的轉錄作用 (C)RNA 的轉譯作用 (D)A 與 B 皆需要
34. 植物的光合作用進行卡爾文循環 (Calvin cycle) 時，如果循環一次只能固定一分子的二氧化碳，則植物必須進行幾次的卡爾文循環，才能製造 6 分子的葡萄糖? (A)6 (B)12 (C)18 (D)36
35. 下列那一種幹細胞 (stem cell) 的分化能力最強，可以產生各種功能的組織細胞? (A)胚胎幹細胞 (B)骨髓幹細胞 (C)臍帶血幹細胞 (D)人工幹細胞
36. 驅動細胞週期 (cell cycle) 前進的因素，主要是受到細胞那一部位存在的訊息分子所影響? (A)細胞核 (B)細胞質 (C)細胞膜 (D)核仁
37. 人類癌症的產生與兩種基因有關，原致癌基因 (proto-oncogene) 與抑癌基因 (tumor suppressor gene)，分別發生何種變化會增加罹癌的風險? (A)打開，關閉 (B)關閉，打開 (C)打開，打開 (D)關閉，關閉
38. 最近國內爆發禽流感疫情，檢驗出全球首見的新型 H5N2 與 H5N8 病毒，致死率高，試問 H 與 N 代表病毒的什麼? (A)兩種表面蛋白質 (B)兩種核酸物質 (C)兩種套膜 (envelope) (D)兩種感染模式
39. 噬菌體感染細菌的模式中，那一種模式會產生原噬菌體 (prophage)? (A)潛溶週期 (lysogenic cycle) (B)溶裂週期 (lytic cycle) (C)A 與 B 兩種模式皆會 (D)A 與 B 兩種模式均不會
40. 細胞週期有其特定的檢查哨 (checkpoint)，可以檢查細胞是否已經完成該階段的工作，才能進入到下一個階段。其中通過那一個檢查哨 (checkpoint) 的檢查，可以使細胞從 G2 期進入到 M 期? (A)G1 (B)S (C)G2 (D)M

嘉南藥理大學 103 學年度第二學期轉學生招生考試及藥學系轉系考標準答案

【四技二、三年級、二技一年級及四技一年級核題】考試科目（一）：英文

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|----|----|----|----|----|----|----|----|----|----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| C | C | D | A | A | B | B | D | D | B |
| 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| A | A | D | B | C | A | A | A | B | A |
| 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| D | D | A | A | C | B | A | C | B | A |
| 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 |
| B | B | A | B | C | A | A | C | D | D |

嘉南藥理大學 103 學年度第二學期藥學系轉系考試標準答案

【四技一年級核題】考試科目(二)：普通化學及普通生物學

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|----|----|----|----|----|----|----|----|----|----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| C | C | A | C | A | C | C | A | D | B |
| 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| B | A | A | D | D | B | C | D | A | B |
| 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| B | A | C | D | B | B | A | B | A | A |
| 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 |
| A | B | A | D | A | B | A | A | A | C |