

國立臺中教育大學 113 學年度教師專業碩士學位學程招生考試

自然專業試題

一、選擇題（1-5 題，每題 4%；6-10 題，每題 2%；共 30%）

1. 假設有一顆質量為 0.1 kg 鋼珠自一光滑斜面的頂端自由地沿斜面滑下抵達底部時共費時 2.0 s。若斜面高度為 1.0 m，則在此過程中重力對鋼珠做功的功率為多少 W？（若重力加速度為 $g = 10.0 \text{ m/s}^2$ ）
 - (A) 1.0
 - (B) 0.5
 - (C) 0.25
 - (D) 0.125
2. 假設有一顆質量為 $1.0 \text{ E}(-5)$ 公斤(kg)雨滴自距離地面 1000.0 公尺(m)處自靜止開始落下，若其終端速度為 0.1 m/s。請問當此雨滴與地面碰撞時其對地面施與的衝量最大可能多少牛頓.米(N.s)？（若重力加速度為 $g = 10.0 \text{ m/s}^2$ ）
 - (A) $1.0 \text{ E}(-5)$
 - (B) $2.0 \text{ E}(-6)$
 - (C) $1.0 \text{ E}(-6)$
 - (D) $2.0 \text{ E}(-7)$
3. 假設有一塊面積為 1.0 平方公尺的光電板，發電效率為 10%。請問當其產生 100 瓦(W)電能時，其反射至周圍環境的太陽光的功率多少瓦(W)？（假設光電板本身不吸收任何太陽光能）
 - (A) $9.0 \text{ E}(+0)$
 - (B) $9.0 \text{ E}(+1)$
 - (C) $9.0 \text{ E}(+2)$
 - (D) $9.0 \text{ E}(+3)$
4. 若有一台風力發電機的扇葉直徑為 160.0 公尺，發電效率為 40%。若某時刻該發電機產生的電能功率為 100 千瓦，則可推論當時作用在風機扇葉上的瞬時風速應為多少 m/s？（空氣密度 1.2 kg/m^3 ，重力加速度為 $g = 10.0 \text{ m/s}^2$ ）
 - (A) $1.0 \text{ E}(-2)$
 - (B) $1.0 \text{ E}(-1)$
 - (C) $1.0 \text{ E}(+0)$
 - (D) $1.0 \text{ E}(+1)$

（背面尚有試題）

5. 現有一個電感器的電感值為 1.0 kH，並將其與一個 1.0 mF 的電容及電阻值為 1.0 kΩ 的電阻串聯成一個封閉振盪阻尼電路。請問該電路的振盪阻尼類型屬下列何者？
- (A) 阻尼的簡諧振盪
 - (B) 次阻尼振盪
 - (C) 臨界阻尼振盪
 - (D) 過阻尼振盪
6. 下列哪一個人體細胞中可以找到最多粒線體？
- (A) 卵巢細胞分泌雌性素
 - (B) 胰臟細胞分泌消化酵素
 - (C) 吞噬細菌的白血球
 - (D) 在長跑者大腿的肌肉細胞
 - (E) 血液中的紅血球
7. 以下何者非溫室氣體？
- (A) 甲烷(CH₄)
 - (B) 水氣(H₂O)
 - (C) 二氧化氮(NO₂)
 - (D) 氯氟烴(CFCs)
 - (E) 氧化亞氮(N₂O)
8. 族群生物學中，將時間 (X 軸) 與族群數量 (Y 軸) 繪製而成關係圖，若呈 J 型曲線代表何種意義？
- (A) 指數型成長
 - (B) 幾何型成長
 - (C) 邏輯型成長
 - (D) K-選擇(K-selection)
 - (E) r-選擇(r-selection)
9. 以下關於光合作用中卡爾文循環(Calvin cycle)的敘述，哪些是正確的？
- A. 是一種暗反應，也叫做碳 (同化) 反應
 - B. 發生反應時在葉綠體內的受質，分為三個階段：二氧化碳固定、還原和二磷酸核酮糖的再生
 - C. 還原階段中，是將 3-磷酸甘油酸轉化為甘油醛 3-磷酸(glyceraldehyde 3-phosphate, G3-P)
 - D. 還原的步驟中，需要 6 個 ATP 進行反應，而核酮糖再生的步驟需要 3 個 ATP 參與反應
 - E. 卡爾文循環中所需的能量(ATP)與電子(NADPH)是由光反應供給

- (A) ACD
- (B) ABC
- (C) BCD
- (D) BCE
- (E) CDE

10. 健康的人體在吸收營養後，下列哪些組織或器官是可以直接利用脂肪酸，使其分解並產生能量？

- (A) 心臟與肝臟
- (B) 心臟與骨骼肌
- (C) 大腦與肝臟
- (D) 大腦與骨骼肌
- (E) 大腦與腎皮質

二、問答題（共 70%）

1. 使用複式顯微鏡觀察活體樣本時，該使用什麼方式讓活體生物較容易觀察，請至少寫出三個？(10%)

2. 請說明轉殖基因的理论與技術及評論對於生態的影響？(20%)

3. 2024 年 4 月 8 日，在墨西哥、美國與加拿大等地，可觀測到日全食，科學家也利用這個機會，探測並研究日冕，而日冕是太陽風產生的源頭之一。請回答下列有關太陽風的問題：

- (1) 太陽風的主要成分為何？(5%)
- (2) 為什麼強烈的太陽風暴，可能影響地球的通訊？(5%)
- (3) 太陽風造成了極光的現象，極光的形成原理為何？(5%)

4. 臭氧照光分解成氧分子與氧原子的反應式可寫為 $O_3 \rightarrow O_2 + O$ ，若此反應屬於

一級的動力學，其微分速率定律可寫為 $\frac{d[O_3]}{dt} = -k[O_3]$ ，其中 t 為時間， k 為速

率常數。請從微分速率定律，推導出此反應的積分速率定律，亦即推導出 O_3 濃

度隨時間變化的關係。(10%)

5. 請問何謂勒沙特列原理(Le Châtelier's Principle)，原理為何？(15%)

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美術及視覺藝術專業試題

一、選擇題（每題 4%，共 100%）

1. 1930 年郭雪湖以《南街殷賑》（如圖一）獲得臺灣美術展覽「台展賞」，描繪臺北市大稻埕南段迪化街霞海城隍廟口節慶景象，請問這件作品為何種類型的創作？

- (A) 水彩畫
- (B) 油畫
- (C) 膠彩畫
- (D) 版畫
- (E) 蛋彩畫



圖（一）

2. 《合奏》（如圖二）1934 年入選日本帝國美術展覽，為台展三少年中哪位女性藝術家的作品？

- (A) 陳進
- (B) 郭雪湖
- (C) 林玉山
- (D) 陳澄波
- (E) 李梅樹



圖（二）

（背面尚有試題）

3. 《送子天王》(如圖三)，收藏於日本大阪市立美術館，原作作者為唐代有「畫聖」之稱的哪一位藝術家？

- (A) 吳鎮
- (B) 吳道子
- (C) 吳昌碩
- (D) 吳歷
- (E) 吳冠中



圖(三)

4. 下列何者為被喻為「天下三大行書」帖之第三大行書？

- (A) 王羲之《快雪時期帖》
- (B) 王獻之《中秋帖》
- (C) 歐陽詢《九成宮醴泉銘》
- (D) 懷素《自序帖》
- (E) 蘇軾《寒食帖》

5. 《容臺別集·畫旨》：「禪家有南北二宗，唐時始分，畫之南北二宗，亦唐始分。」將繪畫分為南北二宗，著色山水歸於北宗，水墨表現為南宗，此為明代哪位書畫家的論述？

- (A) 黃公望
- (B) 文徵明
- (C) 趙孟頫
- (D) 董其昌
- (E) 郭熙

6. 有關核心素養「藝-E-B1 理解藝術符號，以表達情意觀點」，以下藝術領域學習重點何者與之呼應？

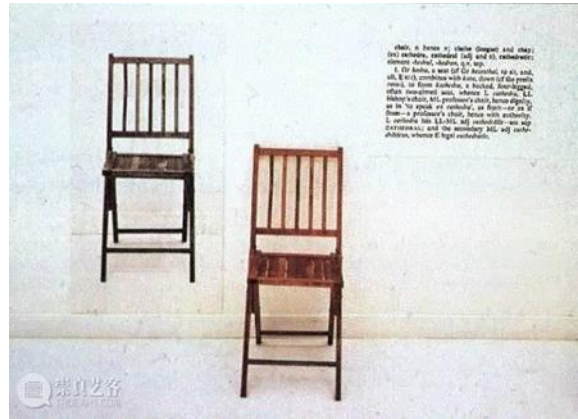
- (A) 1-III-6 能學習設計思考，進行創意發想和實作
- (B) 2-II-2 能發現生活中的視覺元素，並表達自己的情感
- (C) 2-III-2 能發現藝術作品中的構成要素與形式原理，並表達自己的想法
- (D) 2-III-5 能表達對生活物件及藝術作品的看法，並欣賞不同的藝術與文化
- (E) 3-III-1 能參與、記錄各類藝術活動，進而覺察在地及全球藝術文化

7. 有關兒童視覺-空間智能，可檢核其表現與行為特徵，以下何者不正確？
- (A) 善於觀察與辨識面貌、色彩、物體之形狀
 - (B) 喜歡用文字描述觀察對象
 - (C) 善於玩走迷宮遊戲
 - (D) 能同時察覺到鮮明與細微的形態
 - (E) 喜歡建構立體物件，並能在腦海中將其移動、旋轉或與其它物件互動
8. 以下有關跨學科「STEAM」教育之五個科目，何者不正確？
- (A) 科學(Science)
 - (B) 科技(Technology)
 - (C) 環境(Environment)
 - (D) 藝術(Art)
 - (E) 數學(Mathematics)
9. 依據美術教育學者羅恩菲爾(Victor Lowenfeld, 1903~1960)研究的兒童繪畫發展階段，兒童的注意力首次從製作過程逐漸轉到成品上，於是藝術成品隨年齡的增加而變得愈來愈重要，此時期稱為？
- (A) 塗鴉期
 - (B) 前圖式期
 - (C) 圖式期
 - (D) 黨群期
 - (E) 推理期
10. 為增進學生美術創作素養，以及培養國民美術鑑賞能力並落實學校美術教育，辦理全國學生美術比賽，其中國小低年級兒童可以參加的類別為：
- (A) 繪畫類
 - (B) 書法類
 - (C) 平面設計類
 - (D) 漫畫類
 - (E) 水墨畫類

(背面尚有試題)

11. 《一把和三把椅子》(如圖四)真實的椅子與這把椅子的大照片，以及字典上影印放大有關椅子的文字，三樣放在一起展出。請問這是以下哪位觀念藝術家的作品？

- (A) 莫斯·哈克(Hans Haacke)
- (B) 約瑟夫·科蘇斯(Joseph Kosuth)
- (C) 索爾勒·勒維特(Sol Lewitt)
- (D) 道格拉斯·許布勒(Douglas Hubler)
- (E) 羅伯特·巴里(Robert Barry)



圖(四)

12. 有關古典超現實攝影的特色，下列敘述何者不正確？

- (A) 用面具來暗示不可識的世界
- (B) 用較理性的過程控制如粗粒子影像達成夢幻結果
- (C) 以黑白相反的影像來暗示另一個世界的存在
- (D) 以更冒險、更自由的精神來探索不可視的潛意識世界
- (E) 以重複、類似、對稱及中途曝光來造成真實與詭異並存的影像

13. 攝影論〈消失的技法〉，強調物的存在不是為了提示自身，而是為了隱藏自身；某個部份被拍攝成照片影像，並不是為了生存，而是為了巧妙的消失。城市生活中的物與攝影家的關係並不單純；它們是攝影家移情的物件，物是人創造的，但它們一旦脫離人之手，也就獲得自己的生命與價值。以上的論述是下列哪位思想家提出來的？

- (A) 尚·布希亞(Jean Baudrillard)
- (B) 羅蘭·巴特(Roland Barthes)
- (C) 波里·巴登(Polly Braden)
- (D) 渥特·班雅明(Walter Benjamin)
- (E) 維克·多柏根(Victor Burgin)

14. 高德納於 1970 年主導哈佛大學的一項稱為「零計畫」的研究，這項計畫研究兒童及青少年的藝術製作、對藝術的反應、符號的使用等發展。該研究最後歸納出美感投入的轉機階段(13-20 歲)，此階段的青少年發展出較成熟的美感判斷，其特徵的敘述，何者不正確？

- (A) 具有批判性的選擇能力

- (B) 要求深入的瞭解藝術
- (C) 建立形式的分析能力
- (D) 建立相對的判斷規準
- (E) 脫離自我中心的思考方式，選擇適當的用語來描述其觀察

15. 以下有關現行最新公共藝術法規內容所述，何者不正確？

- (A) 鑑價會議文化部專家學者出席需三人以上
- (B) 興辦機關設置計畫應成立執行及徵選小組，成員五人至九人
- (C) 視覺藝術專業類委員應包括建築設計及景觀造園領域人士
- (D) 設置計畫預算在 50 萬元以下者，得經審議會同意納入主管機關設立之基金或專戶
- (E) 各縣市審議會應設置委員九至十五人，其中一人為召集人

16. 圖（五）為一場設計工作坊的紀實，主持人請參與同學一起動手，利用個人身邊物件排列色彩分布位置，藉以記錄色彩意象。這種語意差異分析法所採用的色彩形象尺度表為：

- (A) 多向型色彩形象
- (B) 對比型色彩形象
- (C) 雷達圖色彩形象
- (D) 十字型色彩形象
- (E) 隨機型色彩形象



圖（五）

17. 沃夫林(Heinrich Wölfflin, 1864-1945)在其名著《藝術史的基本概念》(Kunstgeschichtliche Grundbegriffe, 1915-英譯 Principles of Art History, 中譯《藝術史的原則》)中提出五組相對的形式概念,用來說明文藝復興藝術與巴洛克藝術的差異,請問下列哪一組概念不在他的五組基本概念中:

- (A) 視覺與觸覺
- (B) 線性與繪畫性
- (C) 平面與深度
- (D) 閉鎖與開放的形式
- (E) 多樣性與統一性

18. 暈塗法(sfumato)是文藝復興繪畫經典技法之一,當時最重要的實踐者是:

- (A) 波提且利(Sandro Botticelli)
- (B) 提香(Tiziano Vecellio)
- (C) 韋羅基奧(Andrea del Verrocchio)
- (D) 達文西(Leonardo da Vinci)
- (E) 米開朗基羅(Michelangelo)

19. 臺中州廳為西方古典樣式建築,由日本籍建築師森山松之助設計(如圖六),其二樓列柱採取下列哪一種古典柱式風格?

- (A) 托斯坎柱式(Tuscan order)
- (B) 多立克柱式(Doric order)
- (C) 愛奧尼克柱式(Ionic order)
- (D) 科林斯柱式(Corinthian order)
- (E) 複合柱式(Composite order)



圖(六)

20. 慕夏(Alphonse Mucha)的海報設計作品，色彩鮮麗，線條優柔纏繞，極富裝飾效果。(如圖七)被認為是下列哪一種設計風格的代表：

- (A) 裝飾藝術(Art deco)
- (B) 新藝術(Art nouveau)
- (C) 包浩斯(Bauhaus)
- (D) 流線摩登(Streamline Moderne)
- (E) 美術工藝運動(Arts and Crafts Movement)



圖(七)

21. 羅丹(Rodin)作品「地獄門」所描述主題是來自哪一本文學著作？

- (A) 約翰·彌爾頓(John Milton)《失樂園》
- (B) 但丁(Dante Alighieri)《神曲》
- (C) 查爾斯·狄更斯(Charles Dickens)《雙城記》
- (D) 巴爾扎克(Honoré de Balzac)《無神論者望彌撒》
- (E) 列夫·托爾斯泰(Leo Tolstoy)《戰爭與和平》

22. 杜布菲(Jean Dubuffet)作品(l'Hourloupe)(如圖八)，標題是藝術家自創的名詞，其風格適用於下列何派別？

- (A) 抽象表現主義
- (B) 晚期立體派
- (C) 立體派
- (D) 未來派
- (E) 原生藝術



圖(八)

23. 電腦繪圖課程常用的軟體 Illustrator，是以向量繪製圖形，直接儲存檔案的副檔名，下列何者不正確？
- (A) .ai
 - (B) .eps
 - (C) .jpg
 - (D) .pdf
 - (E) .ait
24. 興建中的臺中市綠美圖，為下列哪位獲得普立茲克建築獎之日本建築師設計？
- (A) 安藤忠雄
 - (B) 隈研吾
 - (C) 平田晃久
 - (D) 坂茂
 - (E) 妹島和世
25. 現今研究臺灣美術史的論述，哪一本著作對應作者是不正確？
- (A) 王秀雄《西方美術·台灣製造—臺灣現代美術的批判》
 - (B) 林惺嶽《台灣美術風雲四十年》
 - (C) 謝里法《日據時代臺灣美術運動史》
 - (D) 王白淵《臺灣美術運動史》
 - (E) 賴明珠《鄉土凝視—20世紀臺灣美術家的風土觀》

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英語專業試題

I. Vocabulary and Grammar: Choose the most appropriate word or phrase in the following five choices to complete each sentence. (40%; 2% each)

1. The novel was so intricately _____ that it kept readers guessing until the very end.
(A) convoluted (B) rudimentary (C) pedestrian
(D) mundane (E) facile
2. His speech was characterized by a _____ of eloquence and passion, captivating the audience from start to finish.
(A) plethora (B) dearth (C) gamut
(D) fusion (E) nexus
3. The detective meticulously collected _____ evidence to build a solid case against the suspect.
(A) circumstantial (B) anecdotal (C) hearsay
(D) spurious (E) contemplative
4. The renowned scientist made a groundbreaking _____ in the field of quantum physics.
(A) conjecture (B) innovation (C) hypothesis
(D) surmise (E) meditation
5. The CEO's decision to step down came as a _____ to the board of directors, who were unaware of his plans.
(A) surprise (B) façade (C) mirage
(D) apparition (E) chimera
6. Despite their differences, the two nations managed to reach a _____, averting the threat of war.
(A) dissent (B) discord (C) consensus
(D) contention (E) altercation
7. The novel's protagonist faces a moral _____ as he grapples with the consequences of his actions.
(A) impasse (B) quandary (C) embryo
(D) condensation (E) alternation
8. The journalist's _____ reporting shed light on the corruption within the government, sparking public outrage.
(A) biased (B) subjective (C) partisan
(D) bilateral (E) impartial

(背面尚有試題)

9. The diplomat's skillful _____ defused the tensions between the warring factions, paving the way for peace talks.
 (A) instigation (B) exacerbation (C) provocation
 (D) mediation (E) intervention
10. Despite initial setbacks, the project's progress has been _____, indicating potential success.
 (A) unlucky (B) ominous (C) inauspicious
 (D) encouraging (E) fateful
11. Despite _____ hard, she couldn't finish the project on time.
 (A) works (B) she worked (C) her has working
 (D) she was working (E) her having worked
12. Not only _____ to the conference, but he also presented a paper.
 (A) he went (B) went he (C) did he go
 (D) he did go (E) did him go
13. _____ for the delay, the flight would have arrived on time.
 (A) If it wasn't (B) Were it not (C) Had it not been
 (D) If it hadn't (E) If not it
14. Not until I arrived at the airport _____ that I had forgotten my passport.
 (A) I realized (B) did I realize (C) realized I
 (D) I have realized (E) I was realizing
15. The project was _____ challenging that it required a team effort to complete.
 (A) nevertheless (B) very (C) much
 (D) too (E) so
16. He's a fantastic teacher, _____?
 (A) doesn't he (B) isn't he (C) hasn't he
 (D) doesn't it (E) isn't it
17. She studied diligently _____ she could pass the exam.
 (A) in order to (B) yet (C) so
 (D) however (E) nearly
18. What would have happened if the bridge _____?
 (A) is broken (B) had been broken (C) had broken
 (D) would have been broken (E) should be broken
19. No sooner had he _____ the door than the phone began to ring.
 (A) closed (B) close (C) closing
 (D) has closed (E) did close
20. My professor insisted _____ the thesis by the end of this year.
 (A) to finish (B) over my finishing (C) finishing
 (D) for my finishing (E) on my finishing

II. Cloze Test (30%; 2% each)

Bilingual education programs are designed to 21 both language proficiency and academic success in two languages. These programs often 22 traditional teaching methods and require innovative approaches to effectively 23 both languages into the curriculum. By encouraging students to develop cognitive and linguistic skills in 24 languages, educators 25 a more inclusive educational environment. This approach not only 26 the learning experience but also prepares students for a globalized world. The key 27 successful bilingual education is to maintain high standards in both language and content instruction, ensuring that students 28 proficiency in all subject areas. Such programs must 29 continuously to meet the 30 needs of diverse student populations. In order to 31 these initiatives, educational leaders must 32 ongoing professional development opportunities for teachers. This is crucial for them to stay 33 about best practices in bilingual instruction. 34, the goal of bilingual education is to empower students by giving them the tools to excel in an interconnected world, 35 enhancing their future career opportunities and cultural understanding.

- | | | | |
|--------------------|------------------|---------------|--------------------|
| 21. (A) inhibit | (B) foster | (C) mitigate | (D) limit |
| 22. (A) follow | (B) uphold | (C) provide | (D) challenge |
| 23. (A) implement | (B) attach | (C) integrate | (D) detach |
| 24. (A) manipulate | (B) multiply | (C) multiple | (D) multitude |
| 25. (A) hinder | (B) adhere | (C) obstruct | (D) promote |
| 26. (A) diminishes | (B) enriches | (C) lessens | (D) lowers |
| 27. (A) to | (B) for | (C) of | (D) in |
| 28. (A) forsake | (B) obtaining | (C) neglect | (D) achieve |
| 29. (A) adapt | (B) stagnate | (C) solidify | (D) freeze |
| 30. (A) evading | (B) overwhelming | (C) missing | (D) evolving |
| 31. (A) oppose | (B) support | (C) block | (D) resist |
| 32. (A) conceal | (B) withhold | (C) provide | (D) take |
| 33. (A) informing | (B) inform | (C) informed | (D) informal |
| 34. (A) Ultimately | (B) Initially | (C) Firstly | (D) Nevertheless |
| 35. (A) instead of | (B) thus | (C) otherwise | (D) in addition to |

(背面尚有試題)

III. Reading Comprehension (30%; 2% each)

In recent decades, there have been significant changes in childhood. Older, better-educated parents are more involved in their children's education. Safer environments and better regulations have reduced accidental injuries. Digital technologies empower children's self-expression and socialization, and in times of need, help could be just a phone call away. In a number of measures, modern children's lives have clearly improved: they have better health care, public safety, and support for their physical and mental well-being. At the same time, 21st-century children are reporting more stress and anxiety, including increased pressure to excel in an ever more competitive educational environment. On a physical level, they are reporting less sleep. Child obesity is increasing, bringing with it potential physical, social, and psychological challenges. There are worries that children are spending less time on old-fashioned activities like running around outside in favor of screen time. And the omnipresent nature of the digital world means that risks like cyberbullying follow them from the schoolyard into their homes. Therefore, education needs to evolve with these changes. It should be innovative and collaborative, involving parents and communities to enhance children's resilience and well-being. Understanding what has changed and what has not is crucial for developing effective policies and solutions.

36. According to the passage, what are some improvements in modern children's lives?
- (A) Increased pressure to excel in education.
 - (B) More time spent on-screen activities.
 - (C) Safer environments and better regulations.
 - (D) Limited access to digital technologies.
37. According to the passage, what challenges do 21st-century children face?
- (A) Decreased sleep and reduced physical activity.
 - (B) Limited access to digital technologies.
 - (C) Decreased pressure to excel in education.
 - (D) Decreased exposure to cyberbullying.
38. How does the passage suggest education should evolve in response to modern challenges?
- (A) By maintaining traditional teaching methods.
 - (B) By focusing solely on academic achievement.
 - (C) By using innovative and collaborative models.
 - (D) By ignoring the role of parents and communities.
39. Why is it important to understand what has not changed in children's lives?
- (A) To over-dramatize the challenges children face.
 - (B) To guard against the tendency to overlook real changes.
 - (C) To discourage the use of digital technologies.
 - (D) To limit children's access to digital tools.

40. What is the main purpose of the passage?
- (A) To criticize modern parenting practices.
 - (B) To highlight the challenges of digital technologies for children.
 - (C) To discuss the importance of understanding childhood in the 21st century.
 - (D) To suggest that children should not use digital technologies.

The teacher's role in an English as a Medium of Instruction (EMI) course is crucial. EMI courses will be less effective if teachers simply take their existing practices and behaviors and teach their classes the same way they always have, simply switching out the native language for English. Teaching in English gives you an opportunity to improve your teaching style and the tasks you assign to students. For example, when you teach in English, you will find that your students can learn more material and succeed in the course when lessons are interactive; you will want to reduce the amount of time that you lecture and increase the amount of time you ask students to be more actively involved, such as with discussions, presentations, or group work. Teaching in English also allows you to continue to strengthen your own proficiency in the language, which can be professionally and personally satisfying. Teaching your content in English will require new or expanded roles for most instructors. One of the most important considerations when you begin planning for how you will develop and teach a course in English is your role as a teacher. With EMI, the lecturer has more successful roles as a facilitator, content expert, support coach, bridge builder, and role model.

41. Why is the teacher's role crucial in an EMI course?
- (A) To maintain existing practices and behaviors.
 - (B) To switch out the native language for English.
 - (C) To improve teaching style and student engagement.
 - (D) To reduce the amount of time spent on teaching.
42. How can teaching in English benefit instructors personally?
- (A) By decreasing their workload.
 - (B) By increasing their language proficiency.
 - (C) By reducing student motivation.
 - (D) By eliminating the need for reflection on teaching practices.
43. What is one example of how teaching in English can improve student learning?
- (A) By making lessons more interactive.
 - (B) By increasing the amount of time spent on lecturing.
 - (C) By decreasing student involvement in discussions.
 - (D) By eliminating the need for group work.

(背面尚有試題)

44. What is an important consideration when planning to teach a course in English?
- (A) Reducing the amount of time spent on lectures.
 - (B) Maintaining the same teaching style as before.
 - (C) Understanding the role of the teacher in an EMI course.
 - (D) Using only traditional teaching methods.
45. What is the main idea of the passage?
- (A) The importance of using existing teaching practices in an EMI course.
 - (B) The challenges of reducing student involvement in an EMI course.
 - (C) The limitations it imposes on instructors in an EMI course.
 - (D) The crucial role of the teacher and the opportunities in an EMI course.

TikTok, the wildly popular video-sharing app, has captured the hearts of millions of Americans with its unique blend of creativity and entertainment. Despite its American appeal, TikTok is owned by ByteDance, a Chinese company. This has raised concerns among lawmakers about national security, fearing that the Chinese government could access sensitive user data or influence content on the app.

In response to these concerns, the House of Representatives passed a bill that would force ByteDance to sell TikTok to a non-Chinese owner or face a ban. However, this process is complex and could face legal challenges from TikTok and its creators. Even if the bill passes, regulatory approval and potential intervention from Beijing could further complicate the situation.

TikTok's impact on American culture is undeniable. Since its launch in the United States in 2018, it has become the most downloaded app in the country and the world. Unlike other social media platforms, TikTok focuses on entertainment rather than social connections. Its algorithm analyzes user behavior to create a personalized feed, making it incredibly addictive for users.

The app has influenced various aspects of American life, from music and movies to product success and celebrity status. TikTok's future in the United States remains uncertain, but its impact on American culture is undeniable.

46. Why did the House of Representatives pass a bill regarding TikTok?
- (A) To ban TikTok due to its Chinese ownership.
 - (B) To force TikTok to sell to a non-Chinese owner.
 - (C) To improve TikTok's security features.
 - (D) To increase TikTok's user data collection.
47. What is one potential concern about TikTok's Chinese ownership?
- (A) The Chinese government could influence content.
 - (B) There might be a lack of creativity and limitations in the app.
 - (C) There could be an increase in American cultural influence.
 - (D) The app might not have improved security features.

48. How has TikTok's algorithm contributed to its popularity?
- (A) By analyzing user behavior to create a personalized feed.
 - (B) By focusing on social connections over entertainment.
 - (C) By limiting inappropriate ads and user engagement.
 - (D) By targeting a specific cultural group.
49. How did TikTok differ from other social media platforms in terms of its goal?
- (A) It focused on social connections.
 - (B) It is aimed at pure entertainment.
 - (C) It emphasized privacy and security.
 - (D) It targeted a specific age group.
50. What would be a good title for this passage?
- (A) The Rise of TikTok in American Culture
 - (B) TikTok's Algorithm and User Engagement
 - (C) TikTok: A Chinese-Owned App in American Culture
 - (D) The Impact of TikTok on Social Media Platforms

音樂專業試題

【本考科得以鉛筆作答】

- 一、請以歌曲〈寶島台灣〉，設計國小五年級一節 40 分鐘演唱教學的學習活動，以音樂概念與音樂元素(music concepts and elements)為學習重點。(共 25%)
1. 進行教材分析(調號、拍號、節奏型、重要之音樂元素及音樂概念)。(10%)
 2. 訂定學習目標(5%)、設計學習步驟(5%)、設計評量。(5%)

寶島台灣

楊兆禎 採譜
蔡昱姍 編曲
陳亞青 改編

♩ = 96

FM Gm bEM CM7 FM FM

寶 島 台 灣 好 風 光 名
Pao dao tai wan hao fong guang ming

7 GM Cm bBM Gm Cm7 FM

揚 四 海 好 地 方 阿 里 山
yang sih hai hao di fang a li san

13 bBM GM FM

日 月 潭 墾 丁 烏 來 野 柳 溪 頭
rih yue tan ken ding wu lai ye liu si tou

19 Cm7 FM ♩ = ♩ FM Gm bEM Cm7 FM FM GM

花 蓮 港 寶 島 台 灣 像 天 堂 豐 衣
hua lian gang pao tao tai wan siang tian tang fong yi

25 Cm bBM Gm Cm7 FM bBM Gm

足 食 快 樂 鄉 烏 龍 茶 甘 蔗 糖 椪 杆 鳳 梨 西 瓜
zu shih khuai le siang wu long cha gan jhe tang pong kan fong li si gua

31 FM Cm7 FM Cm7 bEM FM

香 蕉 和 穀 糧 寶 島 台 灣 好 地 方
siang jiao han gu liang pao tao tai wan hao di fang

選自 客家歌謠合 唱曲譜選集

(背面尚有試題)

二、請應用所附譜例〈我是隻小小鳥〉，設計一節 40 分鐘雙語音樂教學教案，教案內容應包括教學設計理念、學習目標、教學活動，以及評量規準。(25%)

我是隻小小鳥

德國民歌
杜沛人詞

稍快板

1 我 是 隻 小 小 鳥， 飛 就 飛 叫 就 叫，

5 自 由 逍 遙。 我 不 知 有 憂 愁，

9 我 不 知 有 煩 惱， 只 是 愛 歡 笑。

※請標註題號後，於作答區內作答※

題號	作答區

三、四部和聲寫作，請依照數字低音完成四部和聲，且標明調性、羅馬級數或功能符號。請在題目卷之譜例上作答。(20%)

6
 ♯ ♯
 6[♯] 6
 6 5
 6-- 6
 6 5 6 6
 8-----7
 6 5----
 4 ♯----

(背面尚有試題)

四、請分析下方譜例，並在作答區上標明題號回答下列問題。（共 30%）

1. 作品為何調？(5%)
2. 作品為何種曲式？(5%)
3. 以曲式為基礎，寫出段落與其小節數。(10%)
4. 說明小節 58 與小節 65 的和聲用法為何？(10%)

Fräulein Maximiliane Brentano gewidmet.

Vivace. *sempre legato*

p dolce *cresc.* *adagio espressivo.* *f* *p* *cresc. f* *cresc.* *cresc.* *p* *cresc.* *p** *f* *dim.* *p** *espress.* *cresc.* *tempo I* *ri - tar - dan - do dolce* *dim.*

*) The fingering in italics and the pedal indications are Beethoven's.

This musical score is for a piano piece in D major, 3/4 time. It consists of six systems of two staves each. The first system (measures 1-4) includes fingering numbers (1, 2, 3, 4, 5) and the instruction *sempre legato*. The second system (measures 5-9) features a *cresc.* marking and a slur over measures 7-9. The third system (measures 10-14) includes a circled measure number 25 and a *cresc.* marking. The fourth system (measures 15-19) includes a circled measure number 30 and *sf* markings. The fifth system (measures 20-24) includes a circled measure number 35 and *sf* markings. The sixth system (measures 25-29) includes a circled measure number 40, *sf* markings, and a *cresc.* marking. The score concludes with a final measure (measure 30) containing a circled measure number 45.

8

45 50

8

legato *p* legato *cresc.* 55

adagio espressivo.

p(?) *f*(?) *cresc. f* (cresc. *p*) *cresc.* 60

f Red. *p* *ff* Red. *dim.* *cresc. f*

espress. p *cresc.*

tempo I

dim. 65 *legato* *ri-tar-dando a tempo*

國立臺中教育大學 113 學年度教師專業碩士學位學程招生考試

原住民族文化與教育試題

一、請問何謂「全民原住民族教育」？(10%)在學校的場域裡，「全民原住民族教育」應該如何實施？請從政策端、學校端、教師端、學生端四面向分析之。(15%)

二、請舉出五個當前臺灣原住民族的重要議題，並加以闡釋其意義。(25%)

三、2007 年 9 月聯合國大會通過《原住民族權利宣言》，其中第 14 條第 1 項：「原住民族有權建立和掌管他們的教育制度和機構，並用自己的語言和適應其文化的教學方法提供教育」，試論此一條文的涵義為何？(10%)以及對我國原住民族教育發展的啟示。(15%)

四、請分析你所報考原民類組的原民文化發展情形。

(一) 依原民類組的未來任教縣市，請寫出一個你選擇要分析的縣市？(1%)

(二) 承上，說明該縣市傳統原民文化特色以及近年辦理的活動情形？(12%)

(三) 倘你曾參加該縣市原民文化活動，請說明該縣市原民文化活動的發展危機是什麼？倘你未曾參加過，請說明如何讓「非原住民者」想要參加此活動。(12%)

國立臺中教育大學 113 學年度教師專業碩士學位學程招生考試
體育專業試題

- 一、槓桿可分為哪幾類別？(5%)並請各舉一日常生活中可見之用品為例說明。(12%)人體肌肉骨骼系統所形成之槓桿多屬第幾類槓桿？(3%)請舉一個槓桿原理實際應用在運動競賽的例子，並做簡要說明。(5%)

- 二、請以訊息處理手段(information processing approach)動作編序(movement programming)的理論基礎，說明個體在面對假動作時所產生的心理不應期(psychological refractory period, PRP)以及刺激出現時間差(stimulus-onset asynchrony, SOA)對其動作表現的影響。(25%)

- 三、行政院頒布 2030 雙語國家政策發展藍圖，期望提升國人的英語能力，體育課程也是政策重要的一環。在雙語教育課程，常見的教學模式為 Content and Language Integrated Learning, CLIL，請問 CLIL 的教學模式有哪兩大目標？(10%)並敘述 CLIL 教學模式的優點為何？(15%)

- 四、學校體育活動的辦理需要人力支持，基於此，請規劃辦理學校體育活動時所需之組織人員任務配置。(25%)