

請務必將答案寫於答案卷上，違者該科不於計分。

- ( )1. 下列何者不是勞工健康保護規則規定之特別危害健康作業？  
(A) 甲苯  
(B) 苯  
(C) 氯乙烯  
(D) 三氯乙烯
- ( )2. 有關夜間輪班下列何者正確  
(A) 連續夜間輪班最好多於二週  
(B) 夜間輪班工作時間應少於早班或小夜班  
(C) 輪完早班接著以輪小夜班較佳  
(D) 輪班順序應常變化
- ( )3. 目前勞工定期一般健康檢查取消胸部 X 光項目，之前主要是為了篩檢哪一項疾病而設？  
(A) 肺癌  
(B) 塵肺症  
(C) 肺結核  
(D) 氣胸
- ( )4. 有關我國無菸職場政策，下列何者正確  
(A) 依據勞工安全衛生法訂定  
(B) 由勞委會安全衛生處推動  
(C) 採鼓勵、輔導機制  
(D) 由衛生局所負責稽查
- ( )5. 有關我國職業傷病通報系統下列何者正確  
(A) 只限醫師通報  
(B) 依法強制通報  
(C) 醫師可匿名通報  
(D) 需在診斷一個月內通報
- ( )6. 依法令規定下列何種作業健康檢查項目不包括肝功能檢查(ALT)？  
(A) 苯  
(B) 黃磷  
(C) 氯乙烯  
(D) 三氯乙烯
- ( )7. 針扎傷害發生時，若受扎傷者是陰性，造成扎傷的針在以下哪種患者身上使用過，造成血清由陰性轉為陽性的機率為最高？  
(A) B 型肝炎患者  
(B) C 型肝炎患者  
(C) HIV 患者  
(D) 梅毒患者

- ( )8. 職業疾病之診斷中，何者之必要性為較低？
- (A) 該項工作暴露應已被證實會引起該疾病
  - (B) 暴露與疾病之發作，應有劑量 - 效應關係
  - (C) 該疾病之發作或明顯惡化是在進入該工作場所之後才發生
  - (D) 暴露者大多數會發作類似的疾病
- ( )9. 電腦工作站的螢幕放置角度應：
- (A) 視線上約 15~25 度
  - (B) 視線上約 30~40 度
  - (C) 視線下約 15~25 度
  - (D) 視線下 30~40 度
- ( )10. 下列那個有關職業性癌症之配對是錯誤的？
- (A) 掃煙囪—陰囊癌
  - (B) 染料工廠—甲狀腺癌
  - (C) 苯—白血病
  - (D) 硫酸氣—肺癌
- ( )11. 鉛中毒是一個最古老但迄今仍然存在的職業病，職業性鉛中毒具備以下何者特徵？
- (A) 我國目前最重要的鉛暴露行業包括電池業、塑膠業、和加油站
  - (B) 鉛中毒再幼兒常引起鉛腦症，在成人則以腹痛和貧血居多
  - (C) 一般人血中鉛不超過 10 ug/dL、政府規定男工人不超過 40 ug/dL，女工人不超過 30 ug/dL、而鉛中毒者血中鉛不至於超過 100 ug/dL
  - (D) 無機鉛最重要進入人體的途徑是吸入和經過皮膚吸收
- ( )12. 容易進入肺泡的粉塵微粒的粒徑以下列何者為主？
- (A) 2 微米以下
  - (B) 2-5 微米
  - (C) 5-10 微米
  - (D) 10 微米以上
- ( )13. 特別危害之作業，以下諸項何者為誤：
- (A) 噪音在 85 分貝以上的作業
  - (B) 從事有機溶劑中毒預防規定之項目如四氯化碳、二硫化碳及正乙烷等
  - (C) 從事製造下列特定化學物質或其重量超過百分之二以上之製劑如聯苯胺及其鹽類、二氯聯苯及其鹽類
  - (D) 粉塵危害預防標準所稱之粉塵作業
- ( )14. 我國勞工法規有關塵肺症症度區分基準，下列何者正確？
- (A) 唯第四症度屬勞工保險職業病
  - (B) 第二症度即為勞工保險職業病
  - (C) X光照像無塵肺症陰影者屬第零症度
  - (D) X光照像為第一型，肺功能正常者屬第一症度
- ( )15. 我國有關噪音作業法規下列何者不正確？
- (A) 辦理勞工八小時日時量平均音壓值超過八十五分貝時，應予勞工戴用聽力防護具
  - (B) 噪音超過九十分貝之工作場所，應標示公告噪音危害預防事項
  - (C) 勞工於九十分貝音壓暴露的工作日容許暴露時間為六小時
  - (D) 噪音作業係指音壓在八十五分貝以上的作業

- ( )16. 噪音是台灣最普遍的職業性危害因子之一，噪音性聽力損失呈現若干特點，請問以下何指為非？
- (A) 在純音聽力圖上，噪音性聽力損失呈現高頻聽力減損，其中又以 4k 或 6k 受到最大的影響。
  - (B) 取決於作業場所的音源狀況，噪音性聽力損失可能引起雙耳相差達 30 dB 的情形。
  - (C) 噪音性聽力損失一般在暴露停止後，便不會再進展。
  - (D) 噪音性聽力損失如果與老年性聽力損失相混合，純音聽力圖可能呈現 bulging 的情形。
- ( )17. 半衰期為 10 小時的毒物，其尿液中濃度反應多久之前的暴露
- (A) 1 小時
  - (B) 當天
  - (C) 1 個月
  - (D) 六個月
- ( )18. 對於工作場所之有害物暴露，下列哪一種控制技術應優先考慮？
- (A) 整體換氣
  - (B) 低毒性之其他取代原料
  - (C) 自然通風
  - (D) 呼吸防護器具
- ( )19. 某工作場所每日使用甲苯 50 公斤，如果要判斷勞工八小時時量平均暴露濃度是否合於法規規定，應如何測定？請選擇最恰當答案。（甲苯八小時工作日時量平均容許濃度為 100 ppm，分子量 92）
- (A) 無須量測直接計算
  - (B) 以活性炭採樣管採樣
  - (C) 以濾紙採樣
  - (D) 以檢知管測定
- ( )20. 如果你進入一剛裝潢好的房子 10 分鐘後，發現有眼睛刺激，鼻子不舒服，造成這種現象的物質可能為
- (A) 苯
  - (B) 臭氧
  - (C) 甲苯
  - (D) 甲醛
- ( )21. 某甲個人可吸入性粉塵濃度為 100 mg/m<sup>3</sup>，則下列何種情形下不可能存在？
- (A) 總粉塵為 110 mg/m<sup>3</sup>
  - (B) 可呼吸性粉塵為 70 mg/m<sup>3</sup>
  - (C) 胸腔性粉塵為 50 mg/m<sup>3</sup>
  - (D) 可呼吸性粉塵加胸腔性粉塵為 120 mg/m<sup>3</sup>
- ( )22. 丁酮之八小時日時量平均容許濃度為 200ppm，如其分子量為 72，則相當於多少 mg/m<sup>3</sup>？
- (A) 62
  - (B) 68
  - (C) 589
  - (D) 643。
- ( )23. 依法令規定，通風不充分之場所係指室內對外開口面積未達底面積百分之二十，或全面積之百分之
- (A) 一
  - (B) 三
  - (C) 五
  - (D) 十

- ( )24. 我國勞工安全衛生法規範，事業單位發生重大職業災害時，雇主應於
- (A) 24 小時
  - (B) 30 小時
  - (C) 40 小時
  - (D) 48 小時 內報告檢查機構。

- ( )25. 某種職業病的篩選方法研究結果如下：

篩檢	職業病	
	有	無
陽性	a	c
陰性	b	d

請問：該篩選方法的精確度 (specificity) 為何？

- (A)  $a/(a+b)$
  - (B)  $b/(a+b)$
  - (C)  $d/(c+d)$
  - (D)  $c/(c+d)$
- ( )26. 某研究想探討飲水中三氯甲烷濃度與直腸癌的相關性。研究者首先分析 2000 年台灣地區各縣市的直腸癌發生率，並利用水質監測紀錄得知各縣市自來水供水之三氯甲烷濃度，以此兩種資料，研究者進行相關分析。此種研究法稱為：
- (A) 橫斷式研究
  - (B) 生態研究
  - (C) 世代研究
  - (D) 病例對照研究
- ( )27. 噪音引起的聽力喪失，初期在多少赫茲 (Hz) 處最為明顯，而形成聽力圖上的凹陷 (dip) 現象？
- (A) 2000
  - (B) 4000
  - (C) 6000
  - (D) 8000
- ( )28. 下列何者不是？
- (A) 鉛會引起貧血；
  - (B) 噪音造成鼻中膈穿孔；
  - (C) 四氯化碳會引起化學性肝炎；
  - (D) 石棉工作者容易罹患肺癌與間皮瘤 (mesothelioma)
- ( )29. Minamata Bay disease in Japan during 1950s was caused by industrial polluted fishes of
- (A) Lead;
  - (B) Arsenic;
  - (C) Chromium;
  - (D) Cadmium;
  - (E) Mercury waste dumping.

- ( )30. In a basement of confined space, a rotten-egg-like stinky smell (臭味) can be caused by
- (A) H<sub>2</sub>S;
  - (B) CO;
  - (C) CO<sub>2</sub>;
  - (D) Oxygen enriched atmosphere.
- ( )31. By the OSHA definition, which one of the following work environments is categorized as a confined space?
- (A) SCBA diving worker;
  - (B) Semiconductor clean-room (無塵室) worker;
  - (C) Marine biologists inside a research submarine;
  - (D) Scrubbing worker inside an “empty” gas storage tank;
  - (E) All of above.
- ( )32. While inspecting a facility, the OSHA inspector should give first priority to
- (A) Investigation of imminent dangers;
  - (B) Investigation of employee complains;
  - (C) Programmed high-hazard inspections;
  - (D) Re-inspections.
- ( )33. 比較工作前後 FEV<sub>1</sub> (用力呼吸第一秒量) 時，用何者統計方法最好？
- (A) Chi-Square test
  - (B) Student t-test
  - (C) Paired t-test
  - (D) McNemar test
- ( )34. 下列各種現象經常是病例對照研究結果產生偏差 (bias) 的來源？
- (A) 健康工人效應
  - (B) 研究樣本失去追蹤
  - (C) 研究對象通常是自願者
  - (D) 研究對象無法正確回憶過去的暴露情形
- ( )35. 高醫職業病科曾經報導電信員工長期暴露於硫酸氣會得
- (A) 子宮頸癌
  - (B) 鼻咽癌
  - (C) 腎病變
  - (D) 腕垂症。
- ( )36. 在台灣曾發現有西南沿海地區人們的手、腳很多皮膚癌和壞疽的情況，稱之為烏腳病，至目前為止已有很多研究，以下何者為非？
- (A) 砷可能不是直接的致癌物，但在很多病例中，很多內臟器官的次發性癌(Secondary Carcinoma)，是由於對砷暴露 (包括食入、注射或吸入) 引起原發性皮膚癌轉移的結果
  - (B) 可能是自來水中含砷而引起。
  - (C) 在動物身上發現砷會和 DNA 聚合，因而會影響 DNA 的修護。
  - (D) 砷能引起角化病，特別是手掌和腳板。

- ( )37. 鉛暴露的生物指標有：血中鉛、尿中鉛、血中 ZPP (zinc protoporphyrin)、骨鉛，以下何者為是？
- (A) 最常用的是尿中鉛、代表累積暴露量的是血中 ZPP。
  - (B) 最常用的是血中鉛、代表累積暴露量的是骨鉛。
  - (C) 最常用的是骨鉛、代表累積暴露量的是血中 ZPP。
  - (D) 最常用的是血中 ZPP、代表累積暴露量的是骨鉛。
- ( )38. 以下非職業性聽力損失主要認定基準：
- (A) 有職業性噪音作業環境之暴露史及合理的聽力損失發病之時序性。
  - (B) 聽力損失必須是感覺性神經性病變 (Sensorineural Hearing Loss) 且純音聽力檢查圖 (Pure Tone Audiogram) 具有特色性的「C5 dip」(凹陷)或其後續變化。
  - (C) 無基線資料者，其純音聽力檢查結果，採用六分處，於 500Hz，1000Hz，2000Hz 及 4000Hz，聽力損失達 30 分貝或以上者。
  - (D) 兩耳之聽力損失程度具不對稱性，即二側聽力損失之差距在 15 分貝 (含) 以上。
- ( )39. 下列何種傳播方式是屬於人與人直接接觸的傳播方式：
- (A) 輸血
  - (B) 握手
  - (C) 飲食
  - (D) 空氣傳染
- ( )40. 人因工程的特性為：
- (A) 以工作來適應人
  - (B) 以人來適應工作
  - (C) 彼此互不適應
  - (D) 依照主管要求。
- ( )41. 電影院的座椅高度與寬度必須採用何種設計原則？
- (A) 極端設計
  - (B) 可調設計
  - (C) 平均設計
  - (D) 重點設計。
- ( )42. 標示上有骷髏與兩根交叉方腿骨符號的是哪一種物質？
- (A) 爆炸物
  - (B) 毒性物質
  - (C) 放射性物質
  - (D) 禁水性物質。
- ( )43. 勞工因職業災害傷、病而死亡，雇主應給予五個月平均工資之喪葬費及多少個月平均工資之死亡補償？
- (A) 25
  - (B) 30
  - (C) 35
  - (D) 40。

- ( )44. Bhopal 事件中造成大量傷亡的化學物質為
- (A) 氫氟酸
  - (B) 三氯乙烯
  - (C) 異氰酸甲酯
  - (D) 多氯聯苯
- ( )45. 影響化學性危害毒性的因子不包括
- (A) 暴露頻率
  - (B) 暴露地點
  - (C) 暴露途徑
  - (D) 代謝能力
- ( )46. 下列有關『氣候暖化對全球公共衛生帶來的衝擊』之各項敘述何者有誤？
- (A) 氣候暖化可能衍生更嚴重的空氣污染
  - (B) 導致某些病媒的擴大繁殖，造成傳染病的蔓延
  - (C) 氣候暖化將減少極低氣溫（寒流）的發生，降低溫帶國家冬季的死亡率
  - (D) 氣候暖化導致農作物的病蟲害增加，導致糧食減產
  - (E) 氣候暖化將導致氣喘或過敏等疾病的增加
- ( )47. 下列何類次族群較易受到室內地面上落塵之暴露？
- (A) 嬰幼兒
  - (B) 國中生
  - (C) 青壯年
  - (D) 婦女
  - (E) 老年人
- ( )48. 職業衛生中常提及之空氣污染物short-term exposure limit (STEL)之判斷或量測時間長短為何？
- (A) 8小時 (B) 1小時 (C) 15分鐘 (D) 1分鐘 (E) 15秒
- ( )49. 判斷某種有害物質是否屬於致癌物，屬於健康風險評估之哪一步驟？
- (A) 危害辨識
  - (B) 劑量反應評估
  - (C) 暴露評估
  - (D) 風險特性描述
  - (E) 風險管理
- ( )50. 下列何者是以管制有害廢棄物越境運送為主旨的國際性環境議題規範？
- (A) 蒙特婁議定書
  - (B) 斯德哥爾摩公約
  - (C) 巴塞爾公約
  - (D) 維也納公約
  - (E) 華盛頓公約

請務必於試卷紙上作答，違者該科不於計分。

1. 請解釋下列名詞之涵義(20%)

- a. Type I error
- b. non-differential misclassification
- c. Central limit theory
- d. Cohort effect
- e. Prevented fraction

2. 如果某學者進行全國各社區之癌症死亡率分析，發現 A 社區之癌症年齡標準化死亡比(SMR)高居全國之冠，請回答下列問題:

- (1). 是否可以直接推論，A 社區較其他各地更容易死於癌症?原因為何?(5%)
- (2). 若有村民懷疑癌症與當地水源有關，請以因果判定標準來加以考慮?(10%)

3. 2014 年 1 月媒體報導大陸 H7N9 禽流感疫情，共有 200 多人感染，其中 50 多人死亡包括了一名醫師，請你對此疫情寫下你的假說，並以此疫情擬定一流行病學研究設計，來探討人類感染 H7N9 禽流感發生原因及可能感染途徑?請回答以下問題:

- (1). 研究假說(5%)
- (2). 研究設計(5%)
- (3). 測量與分析方法(5%)
- (4). 請你擬定相關策略與做法，如何對此疫情決戰於境外或減少國人感染機會?(5%)

4. 徵得 400 名早期電療的鼻咽癌病人同意後進行隨機分配，一半接受中藥調理(治療組)，另一半接受安慰劑(控制組)，個案每半年回診評估鼻咽癌復發狀況，追蹤 5 年期間，治療組有 10 人失去追蹤。研究發現治療組有 12 人復發，控制組有 30 人復發。研究採用 Intention-to Treat 來進行分析。

- (1). 請解釋 Intention-to Treat analysis?優點為何?(5%)
- (2). 治療組與控制組以 Intention-to Treat analysis 的鼻咽癌復發率分別為何?(5%)
- (3). 由上述結果，請問需多少位病人接受中藥調理，才能減少 1 個癌症病人復發的產生(又稱為 number needed to treat)?(5%)
- (4). 由上述結果，請問中藥調理對於預防鼻咽癌復發的功效(efficacy)為?(5%)



5. 有四名工人進入某造船工廠從事油漆噴塗工作，他們在工作前及工作三個月後進行呼肺功能(FEV1)檢測結果如下表，請問工作三個月後工人之 FEV1 是否顯著下降？

( $\alpha=0.05$ ,  $t_{0.95,3}=2.353$ ,  $t_{0.975,3}=3.182$ )(10%)

編號	工作前 FEV1 (L)	三個月後 FEV1(L)
1	3.6	2.2
2	2.9	2.1
3	3.6	2.6
4	2.7	2.8

(1)請設立虛無假設及對立假設？

(2)請進行統計檢定，應用何種統計方法？是否達顯著差異？

6. 徵得大腸癌病人同意後採隨機分派分成兩組，比較治療方法(A 法設 1，B 法設 0)、腫瘤分期(T3-T4 設 1，T1-T2 設 0)及淋巴轉移(轉移設 1，無轉移設 0)對於大腸癌病人 5 年存活預後的影響，請回答下列問題：

(1).同時評估治療方法、腫瘤分期及淋巴轉移三者，對於大腸癌病人存活之危害性(Hazard ratio)，應利用何種統計模式來估評？(5%)

(2)若分析結果如下：治療方法(A 法比 B 法)的回歸係數為-0.13，腫瘤分期(T3-T4 比 T1-T2)的回歸係數為 0.92，及淋巴轉移(轉移比無轉移)的回歸係數為 1.58，請問三者對於大腸癌病人存活之危害比值(Hazard ratio)分別為何？並請以分析結果來解釋淋巴轉移危害比值(Hazard ratio)的意義？(10%)

命題結束，以下空白。

請務必於試卷紙上作答，違者該科不予計分。

**I. SENTENCE COMPLETION:** You are to choose the word or phrase that best completes the sentence. 20%

- \_\_\_\_\_ he began studying in the high school, he experienced strange health problems.  
(A) Shortly before (B) Not long after (C) No sooner than (D) No longer
- She didn't work on the project yesterday, \_\_\_\_\_ work on it tomorrow.  
(A) nor she will (B) nor she does (C) nor will she (D) nor does she
- \_\_\_\_\_ hardiness, orchids can be cultivated particularly easily.  
(A) Their (B) Since their (C) Because of their (D) It is their
- A linguist does not merely analyze language, but is able to investigate \_\_\_\_\_ make errors.  
(A) what causes language learners to (B) causes language learners to what  
(C) what to cause language learners (D) what cause to language learners
- The primary activity of the panda, Yuan Zai, is sleep, \_\_\_\_\_ its waking hours looking for food.  
(A) that it spends (B) for spending (C) and it spends (D) will spend
- They were running although they suspected that the shuttle bus \_\_\_\_\_.  
(A) has already gone (B) was already going (C) already went (D) had already gone
- \_\_\_\_\_ the movie for years, Mrs. Holiday knew instinctively what the next crisis would be.  
(A) Watch (B) Watched (C) She watched (D) Having watched
- Engines are machines \_\_\_\_\_ power or motion.  
(A) produce (B) producing (C) produced (D) which produced
- Besides being expensive, the food in this restaurant tastes \_\_\_\_\_.  
(A) badly (B) too much bad (C) too badly (D) bad
- Being seriously anxious, \_\_\_\_\_.  
(A) we have to ask him to take medicine. (B) he went to the restroom for several times.  
(C) a doctor was sent for him at once. (D) his test score was really low.

**II. CLOZE TEST:** This passage contains several missing words or phrases. You are to choose the best answer for each missing word or phrase in the passage. 10%

Amid leaden wintry skies, it may come as a surprise to Londoners (11) new figures suggest the city has beaten its arch rival, Paris, to become the world's most popular city for tourists. However, a growing spat between the two cities' administrations suggests that, when it comes to comparisons between London and Paris, there are only lies, damn lies and statistics.

Figures (12) this week by the UK's Office for National Statistics show that 4.9 million people visited London from July to September 2013. That was an increase of 20% on the same period in the previous year – (13) London hosted the Olympics – and a new quarterly record. Taking a wider view, for the first nine months of 2013, 12.8 million visitors (14) to the British capital, an increase of 12% compared with the previous year. The figures prompted the city's promotional body, London and Partners, to proclaim that London was "on course to welcome over 16 million visitors in one year." That in turn has led to reports in Britain and abroad that London has trumped Paris as the most visited city in the world.

The two cities have actually swapped the top spot on various lists in recent years. According to the MasterCard Global Destinations Cities Index for 2012, London narrowly beat (15) Paris for the top spot with 16.9 million visitors.

(Source: "London beats Paris as top tourist city. Really?" by Simon Busch in *CNN*, published on January 20, 2014)

- (A) but (B) and (C) or (D) so
- (A) releasing (B) is releasing (C) released (D) has released
- (A) which (B) during which (C) that (D) X
- (A) flattered (B) interceded (C) attributed (D) flocked

15. (A) out (B) on (C) in (D) up

**III. WRITTEN EXPRESSION:** In questions 16-20 each sentence has four underlined words or phrases. Identify the one underlined word or phrase that must be changed in order for the sentence to be correct. 10%

16. Jane Addams, pursuing social reforms and humanitarianism, founding the first charitable institution, Hull-House, in

Chicago and expertly organized civic groups to bring pressure on legislatures and government officials.

17. Behind the notion of the nuclear reactors are the release of the tremendous energy in each fission.

18. The economic development of a country lies not only in a stable basis of finance, but also on a firm foundation of industry.

19. The most living things depend on two main types of cell division, mitosis and meiosis, to reproduce themselves.

20. He has finally got used to cook on an electric stove after having a gas one for so long.

**IV. COMPREHENSION QUESTION: read each passage and answer questions. 60%**

READING ONE

You Just Don't Understand

- A People have different conversational styles. So when people from different parts of the country, or different ethnic or class backgrounds, talk to each other, it is likely that their words will not be understood exactly as they were meant. The desire to affirm that women are equal has made some scholars reluctant to show that they are different. There *are* gender differences in ways of speaking, and we need to identify and understand them.
- B Men often engage the world as “an individual in a hierarchical social order in which they are either one-up or one-down”, a question of gaining and keeping the upper hand. Women are more likely to approach it as “a network of connections” in which conversations are negotiations for closeness and people try to seek and give confirmation and support, and to reach consensus.
- C So, to Josh, checking with his wife about a convenient date for a dinner party resembles “seeking permission”; to Linda it is simply a recognition that lives are interwoven and complex. This is the struggle between independence and **intimacy**. The modern face of chivalry: holding the door is an act of power — showing that I (the male) grant you (the female) permission to pass through. There seems to be a male obsession with ‘freedom’ or independence. Women academics value the opportunity to pursue interests; men value the freedom from others’ control.
- D Throughout history, women have been punished physically and psychologically for talking too much, yet studies show that men talk more and for longer periods. In one study men’s turns ranged from 10.66 to 17.07 seconds, while women’s lasted from 3 to 10 seconds. The difference is that men are more comfortable with public speaking, report talk, women with private speaking, rapport talk. Rapport talk establishes relationships, seeking similarities and matching experiences. “For most men, talk is primarily a means to preserve independence and negotiate and maintain status in a hierarchical order.” Men are more likely to tell jokes in public than women: it is another way of gaining centre stage and proving their abilities.
- E Whereas women’s cooperative overlaps frequently annoy men by seeming to coopt their topic, men frequently annoy women by taking over or switching the topic. Women and men feel interrupted by each other because of the differences in what they are trying to accomplish with talk. Men who approach conversation as a contest are likely to expend effort not to support the other’s talk but to lead the conversation in another direction, perhaps one in which they can take centre stage by telling a story or joke or by displaying knowledge. Women’s effusion of support can be irritating to men who would rather meet with verbal debates.
- F Women are frequently judged differently even if they speak the same way as men. Hayes Bradley found that women using tag-questions were judged less intelligent than men who also used them. Women who did not provide evidence to support their arguments were judged less intelligent than men who did not. People asked why a baby is crying say — if it is a boy — that he is angry and — if it is a girl — that she is scared. When women and men are together, women tend to follow the topics the males want: “male-female conversations are more like men’s conversations than they are like women’s.”
- G “If you understand gender differences in what I call conversational style, you may not be able to prevent disagreements from arising, but you stand a better chance of preventing them from spiraling out of control... Understanding the other’s ways of talking is a giant leap across the communication gap between women and men, and a giant step toward opening lines of communication.”

21. The article is mainly about \_\_\_\_\_.  
(A) reasons women talk differently from men  
(B) ways people have different conversational style  
(C) the differences between men and women using language  
(D) things that make understanding opposite gender difficult
22. The main idea of Paragraph A is \_\_\_\_\_.  
(A) understanding people's words is difficult  
(B) understanding people of the same ethnic backgrounds is easier  
(C) scholars are reluctant to show that genders are different  
(D) we need to know the differences between genders in ways of speaking
23. Paragraph B is mainly about \_\_\_\_\_.  
(A) the engagement of a hierarchical social order  
(B) the importance of social network  
(C) the gender differences regarding social relationships  
(D) how men and women have different social status in speaking
24. Paragraph C is mainly about \_\_\_\_\_ existing in different genders.  
(A) the struggle between independence and intimacy  
(B) the difference between permission and recognition  
(C) the discrepancy between power and interests  
(D) the contradictory between freedom and opportunity
25. In Paragraph C, *intimacy* probably means \_\_\_\_\_.  
(A) closeness (B) control (C) power (D) freedom
26. The main idea of Paragraph D is \_\_\_\_\_.  
(A) women talk more than men  
(B) it's a stereotype that women talk more than men  
(C) men and women have different styles of talking  
(D) women talk more in private, and men talk more in public
27. Which sentence from Paragraph E states the main idea?  
(A) Men frequently annoy women by taking over or switching the topic.  
(B) Women and men feel interrupted by each other because of the differences in what they are trying to accomplish with talk.  
(C) Men are likely to expend effort not to support the other's talk but to lead the conversation in another direction.  
(D) Women's effusion of support can be irritating to men who would rather meet with verbal debates.
28. Which sentence from Paragraph F states the main idea?  
(A) Women are frequently judged differently even if they speak the same way as men.  
(B) Women using tag-questions were judged less intelligent than men who also used them.  
(C) Women who did not provide evidence to support their arguments were judged less intelligent than men who did not.  
(D) Male-female conversations are more like men's conversations than they are like women's.
29. Which of the following is a logical inference based on Paragraph F?  
(A) People have stereotype regarding gender differences in speaking.  
(B) Women use tag-questions more than men do.  
(C) Men talk with evidence more than women do.  
(D) Boys have bad temper than girls do.
30. Paragraph G is mainly about \_\_\_\_\_.  
(A) the importance of understanding the differences of gender in conversational style  
(B) the disagreements existing in the communication gap between women and men  
(C) the giant communication gap between women and men  
(D) the ways of understanding a giant leap and step in communication

## READING TWO

### Slow Down! Why Some Languages Sound So Fast

A It's an almost universal truth that any language you don't understand sounds like it's being spoken at 200 m.p.h. — a storm of alien syllables almost impossible to tease apart. That, we tell ourselves, is simply because the words make no sense to us. Surely our spoken English sounds just as fast to a native speaker of Urdu. And yet it's equally true that some languages seem to zip by faster than others. Spanish blows the doors off French; Japanese leaves German in the dust — or at least that's how they sound.

B But how could that be? The dialogue in movies translated from English to Spanish doesn't whiz by in half the original time after all, which is what it should if the same lines were being spoken at double time. Similarly, Spanish films don't take four hours to unspool when they're translated into French. Somewhere among all the languages must be a great equalizer that keeps us conveying information at the same rate even if the speed limits vary from **tongue** to tongue.

C To investigate this puzzle, researchers from the Université de Lyon recruited 59 male and female volunteers who were native speakers of one of seven common languages — English, French, German, Italian, Japanese, Mandarin and Spanish — and one not so common one: Vietnamese. All of them were instructed to read 20 different texts, including the one about the house cat and the locked door, into a recorder. All of the volunteers read all 20 passages in their native languages. Any silences that lasted longer than 150 milliseconds were edited out, but the recordings were left otherwise untouched.

D The investigators next counted all of the syllables in each of the recordings and further analyzed how much meaning was packed into each of those syllables. A single-syllable word like *bliss*, for example, is rich with meaning — signifying not ordinary happiness but a particularly serene and rapturous kind. The single-syllable word *to* is less information-dense. And a single syllable like the short *i* sound, as in the word *jubilee*, has no independent meaning at all.

E With this raw data in hand, the investigators crunched the numbers together to arrive at two critical values for each language: the average information density for each of its syllables and the average number of syllables spoken per second in ordinary speech. Vietnamese was used as a reference language for the other seven, with its syllables (which are considered by linguists to be very information-dense) given an arbitrary value of 1.

F For all of the other languages, the researchers discovered, the more data-dense the average syllable was, the fewer of those syllables had to be spoken per second — and thus the slower the speech. English, with a high information density of .91, was spoken at an average rate of 6.19 syllables per second. Mandarin, which topped the density list at .94, was the spoken slowpoke at 5.18 syllables per second. Spanish, with a low-density .63, ripped along at a syllable-per-second velocity of 7.82. The true speed demon of the group, however, was Japanese, which edged past Spanish at 7.84, thanks to its low density of .49. Despite those differences, at the end of, say, a minute of speech, all of the languages would have conveyed more or less identical amounts of information.

G "A tradeoff is operating between a syllable-based average information density and the rate of transmission of syllables," the researchers wrote. "A dense language will make use of fewer speech chunks than a **sparser** language for a given amount of semantic information." In other words, your ears aren't deceiving you: Spaniards really do **sprint** and Chinese really do stroll, but they will tell you the same story in the same (39) of time.

H None of that, of course, makes the skull-cracking business of trying to learn a new language any easier. It does, however, serve as one more reminder that beneath all of the differences that separate Tagalog from Thai, from Norwegian, from Wolof, from any one of the world's 6,800 other languages, lie some very simple, very common rules. The DNA of speech — like our actual DNA — makes us a lot closer to one another than we think.

(Source: "Slow Down! Why Some Languages Sound So Fast" by Jeffrey Kluger in *Time*, published on September 8, 2011)

31. In Paragraph B, *tongue* probably means \_\_\_\_\_.

- (A) an organ (B) a language (C) a mouth (D) a word

32. In Paragraph G, *sparse* probably means \_\_\_\_\_.

- (A) little (B) abundant (C) ancient (D) diverse

33. In Paragraph G, *sprint* probably means \_\_\_\_\_.

- (A) wander (B) spat (C) run (D) roam

34. One word is missing in Paragraph G. Which of the following can make the sentence meaningful?

- (A) way (B) number (C) line (D) span

35. Regarding the speed limits of languages, which of the following is not true?
- (A) The speed of spoken Mandarin is faster than that of English.
  - (B) The speed of spoken Urdu is as fast as that of English.
  - (C) The speed of spoken Spanish is faster than that of French.
  - (D) The speed of spoken German is slower than that of Japanese.
36. Which of the following descriptions about the study mentioned in the article is correct?
- (A) Because a two-hour Spanish film is always translated into a four-hour French one, a group of researchers conducted the research.
  - (B) The study recruited subjects who could speak at least two languages.
  - (C) Mandarin is a common language, and so is Italian.
  - (D) All the silences were excluded from the experiment.
37. Which language was used as a reference language for the study?
- (A) English (B) Spanish (C) Mandarin (D) Vietnamese
38. Researchers of the study collected two critical values for each language they investigated. What were they?
- (A) the number of raw data and the information density for each syllable
  - (B) the information density for each syllable and the number of syllables spoken per second
  - (C) the number of raw data and the number of syllables spoken per second
  - (D) None of the above.
39. What was the finding of the study?
- (A) The shorter a syllable is, the more meaning it carries.
  - (B) Each Spanish syllable carries more information than each English syllable does.
  - (C) The number of raw data for Mandarin is higher than that for Spanish.
  - (D) All languages would have carried more or less identical amounts of information during the same amount of time.
40. Which language is easier to learn?
- (A) the one which bears less information in a sentence
  - (B) the one which is spoken in a relatively slow way
  - (C) the one whose DNA is closer to our body's DNA
  - (D) none of the above

### READING THREE

#### British Education System

- A Education in the UK is **compulsory**. Children are legally obliged to attend school from the ages of 5 (4 in Northern Ireland) to 16. In 1992 there were 9.5 million full-time school/college students.
- B Parents can choose between ending their children to state schools or to private schools. State schools are funded by local and central government. About 93% of pupils receive free education from the public sector. The government also sometimes assists schools established by religious groups.
- C Since 1993, parents have the right to express a preference for a particular state school for their children. A system of “**league tables**” – comparative tables which rank schools according to public examination results, truancy rates, destinations of school leavers, and so on – are published in order to help parents make choices. While children usually attend the school they live closest to, now ambitious parents sometimes move to a different neighborhood in order to be close to a well-performing school. Needless to say, good schools tend to be in middle class neighborhoods and it is the wealthier middle classes who can most easily afford to move if they think it is necessary.
- D In the private sector there are independent schools which are commonly, but confusingly, called public schools. (They are called public schools because they were originally seen as “public” alternatives to having private tutors in aristocratic households.) Independent schools receive their funding through the private sector and through tuition rates, with some government assistance. Independent schools are not part of the national education system, but the quality of instruction and standards are maintained through visits from Her Majesty’s Inspectors of Schools. Parents choose to pay fees in order to send their children to these schools because the quality of education is such that their children have a better chance of getting into good universities and/or getting better jobs when they leave school.

- E Up to age 5, children may have some pre-primary schooling in nursery schools, daycare, or play groups. The government has no obligation to provide such facilities and so many are private enterprise arrangements. However, the state realizes such provision is important, especially now that many mothers work, and so they provide some financial support.
- F Between the ages of 5 and 11, pupils mainly attend state sector primary schools. These schools are called co-educational or mixed schools because they admit both boys and girls.
- G From the age of 11 up to around the age of 19, students attend secondary schools. More than 80% of pupils in secondary schools in England and Wales attend mixed schools; 60% in Northern Ireland; Scotland, nearly all.
- H About 90% of secondary schools are comprehensive schools which admit children without reference to their academic abilities. Such schools provide a general education. Pupils can study everything from academic subjects like literature and sciences, to more practical subjects like cooking and carpentry.
- I Foreign languages are taught as an **integral** part of the National Curriculum, reflecting the importance of Britain's relationship with Europe.
- J Those children who do not attend comprehensive schools attend grammar schools instead. Grammar schools select children, usually at the age of 11, through an examination called "the 11-plus". Those who show academic potential are admitted to the grammar schools where the emphasis is on advanced academic work rather than the more general curriculum of the comprehensive schools. In Northern Ireland the grammar school/non-grammar school division is still common, but throughout the rest of Great Britain grammar schools are becoming increasingly rare.
- K After five years of secondary education, (at about age 16) English, Northern Irish and Welsh students sit their GCSEs exams (General Certificate of Secondary Education). GCSEs are the main means of assessing pupils' progress in their final two years of compulsory education. Based on these results, pupils then decide what avenue of education they would like to follow. They have a number of choices. At the age of 16, they can decide to quit school and find a job; or they can prepare to sit exams for university entrance; or they can concentrate on vocational training. Every 16 and 17 year old is guaranteed a place in full-time education or training.
- L Pupils who hope to attend university carry on their academic study in the sixth form for a further two years and then sit A-levels exams (General Certificate of Education – Advanced). Most pupils try to achieve three or four A-levels in the subjects they are most proficient at. Since admittance to universities depends largely on A-level results, the two years spent in the sixth form are very important and often very stressful for British pupils. Among first year university students getting to know each other, the most common question after "What's your name?" and "Where are you from?" is "What A-levels did you take?"
- M Other pupils who decide not to go to university may choose to take vocational training. The vocational equivalent of A-levels are GNVQs (General National Vocational Qualifications), which provide a broadly based preparation for work or for taking further vocational.

(Source: "The Present Education System" in *The Society and Culture of Major English-Speaking Countries*, Bookman, 2002)

41. In Paragraph A, *compulsory* probably means \_\_\_\_\_.  
 (A) comprehensive (B) obligatory (C) complete (D) optional
42. In Paragraph I, *integral* probably means \_\_\_\_\_.  
 (A) immigrant (B) essential (C) international (D) redundant
43. \_\_\_\_\_ receive their funding entirely through government assistance.  
 (A) private schools (B) independent schools (C) state schools (D) public schools
44. The system of "league tables" shows \_\_\_\_\_.  
 (A) which schools are better than others  
 (B) which schools ask for more tuition  
 (C) which schools have more examinations  
 (D) which schools receive less funding from government
45. Which of the following is not true?  
 (A) The majority of children go to boarding schools.  
 (B) Good schools tend to be in middle class neighborhood.  
 (C) The quality of instruction and standards of private schools are supervised.  
 (D) Children studying in private schools can get better jobs when they leave school.

46. Which of the following is not true?
- (A) 3 year olds can go to nursery schools.
  - (B) 9 year olds study in primary schools.
  - (C) 15 year olds attend secondary schools.
  - (D) None of the above is correct.
47. If a student wants to emphasize on advanced academic work, which school should he or she go to?
- (A) comprehensive school (B) secondary school (C) independent school (D) grammar school
48. The number of \_\_\_\_\_ in Britain is decreasing.
- (A) grammar schools (B) comprehensive schools (C) state schools (D) technical schools
49. A fifth-grader of a secondary school may decide his or her future grounded on the examination called \_\_\_\_\_.
- (A) General Certificate of Education – Advanced
  - (B) General Certificate of Secondary Education.
  - (C) the common entrance examination
  - (D) General National Vocational Qualifications
50. Which of the following is not true about the British education system?
- (A) All the state sector primary schools admit both boys and girls.
  - (B) Comprehensive schools provide a general education.
  - (C) The system guarantees students of 16 years old a full-time education or training.
  - (D) The university entrance in Britain is not competitive.