

※選擇題請務必於答案卷上五題一列作答※

EXAMPLE: 1.() 2.() 3.() 4.() 5.()
6.() 7.() 8.() 9.() 10.()

I. Multiple Choice Question. 2 points for each question. 80 points.

PART A: Question 1 to 10 you should choose the answer closest to the meaning to the underlined word or phrase. One answer only.

1. China is suspected as the primary source of SARS that is spreading fast across the world.
(A) minor (B) primitive (C) first (D) intentional (E) targeted
2. The parents have lofty expectations for their son, so they sent him to the best high school.
(A) high (B) shaky (C) small (D) lowly (E) slight
3. Both sides in the election are trying to throw accusation at each other; the ruling party supporters claim that the opposing party is trying to thwart the will of people.
(A) evoke (B) help (C) figure out (D) tickle (E) block
4. Some people believe that lawyers are always working to see that justice is done. On the other hand, some believe that lawyers only want to manipulate the legal system to get what they want. Could both sides be right?
(A) control in a dishonest way (B) give help to (C) explain (D) disagree with (E) cheat on
5. Several companies are bringing out a couple of new models of laptops next year.
(A) changing (B) modifying (C) finishing (D) producing (E) benefiting
6. On the defensive about whether the war is unfolding as quickly and as smoothly as they had expected, the U.S. administration officials expressed confidence in the strength and flexibility of their military plan
(A) removing (B) developing (C) foretelling (D) expecting (E) providing
7. Although the hazards of space travel are many, the rewards made it a worthwhile endeavor.
(A) task (B) difficulty (C) effort (D) behaviors (E) incident
8. The renewed interest in single-sex schooling has fostered a controversy among educators.
(A) remembered (B) repeated (C) confident (D) brought back again (E) delayed
9. The congressman says he hopes the government takes a tough stand on the Cross-Strait issues.
(A) changes its position on (B) is optimistic about (C) makes a difficult choice about
(D) maintains a high standard on (E) is rude about
10. The workers stood in front of the ruined factory and wondered what to do next; they doubted that they would even collect their final pay checks now since the company was insolvent.
(A) changing a name (B) hiring new workers (C) prospering (D) laying people off (E) bankrupt

Part B. Question 11 to 20 you should choose the answer that best completes the sentence. One answer only.

Question 21 to 25 you should choose the best answer to fill each of the numbered blanks in the passage. One answer only.

11. In Hong Kong, most sumptuous bank headquarters _____ by a feng shui master who arranges the environment to make maximum use of "positive energy sources."
(A) have seemed designed (B) seem to have been designed (C) seem to design
(D) were seemingly designed (E) seem designed
12. To call the music of another music-culture "primitive" is one's own standards on a group _____ them.
(A) do not recognize (B) be not recognizing (C) that doesn't recognize (D) , doesn't recognize
(E) be recognized by them

13. Two hamburgers contain _____ the same number of chicken drumsticks.
 (A) more than fat as (B) more fat than (C) more fat as (D) as fat protein (E) fat as
14. Case studies are the target of much skepticism in the scientific community, _____ used extensively by numerous researchers.
 (A) they are (B) unless are (C) are (D) yet they (E) yet they are
15. _____ rain at all falls in the dry season in the Savanna regions of Africa.
 (A) Not (B) Without (C) No (D) Neither (E) Not having
16. A survey of public opinion—popularly called a poll—can provide us with a reasonably accurate measure of how people think, _____ certain conditions are met.
 (A) having (B) giving (C) seeing (D) had (E) provided
17. The higher the content of carbon dioxide in the air, _____.
 (A) more heat it retains (B) than it retains more heat (C) heat will be more retaining
 (D) it retains more heat (E) the more heat it retains
18. *Chicago*, _____, has given life to the musical, a genre many wrote off years ago
 (A) the movie (B) is the movie (C) which has a movie (D) movie it is (E) being movie
19. The purpose of a labor union is to improve the working condition, _____, and pay of its members.
 (A) jobs are secured (B) to be secure (C) the job's security (D) job security (E) having job security
20. Leslie Cheung _____ internationally for his role in "Farewell My Concubine," where he played a homosexual Chinese opera singer — a role which closely mirrored his life.
 (A) have know for the best (B) was best known (C) being best known (D) known (E) known best

_____ 21 is to weep. The human species is the only one in the whole of animated nature that sheds tears. The trained inability of any human being to weep is a lessening of his capacity to be human—a defect which usually goes deeper than the mere inability to cry. _____ 22 we feel like it, let us all have a good cry—and clear our minds of those cobwebs of confusion which have for so long _____ 23 the ineluctable necessity of crying.

21. (A) To be human (B) Human (C) That human (D) Which human (E) Since the human
22. (A) In case (B) Despite (C) Unless (D) If (E) Otherwise
23. (A) prevented us to understand (B) prevented us from understanding (C) prevented understanding
 (D) been prevented us understanding (E) preventing us to understand

The World Health Organization, the Centers for Disease Control and Prevention, and the Hong Kong Health Department have all said masks are mainly of value for health care workers, to help prevent the spread of illness by people who feel sick and to protect _____ 24 with those who feel ill. Advocates of wider mask use contend that people who are starting to feel unwell, and are thus perhaps _____ 25, are more likely to wear masks if they are less likely to be stigmatized in a community where healthy people are wearing masks too.

24. (A) close contact (B) those have contact closely (C) having a contact (D) those in close contact
 (E) at close contact
25. (A) on the verge of infectiousness (B) with the infectious verge (C) in the infectiousness
 (D) infectious verge (E) having verge of infectiousness

PART C: Reading Comprehension. You will read several passages. Each one is followed by one question or a number of questions about it. Question 26-40, you should choose the ONE best answer to each question.

Did you know that the fats in our bodies, which we try so hard to get rid of through exercising and surgery, have a function? That the fat cells fight and never die? That exercising is better than dieting? That 70 percent of your calories are burned while you rest?

What is the main idea of the passage?

26. (A) Fat is increasingly harmful to your health as you age.
(B) There is more to fat than meets the eyes (pun sort of intended)
(C) Understanding in our bodies is important for good health.
(D) The more you rest, the faster your calories will be burned off.
(E) Exercising is as important as Dieting

We do not know how life began, but the fact that we exist proves that the right ingredients, in the right amounts, and arranged in the correct way, did come together at some time in the past. The best approximation is that it happened at least 2.5 to 3 billion years ago.

27. Which of the followings can best identify the topic?
(A) the past (B) time (C) the planet (D) evolution (E) origin of life

As a firefighter, I have seen many people die in hotel fires. Most could have saved themselves had they been prepared. There are over 10,000 hotel fires per year in the United States. In 1979, the latest year for which figures are available, there were 11,500 such fires, resulting in 140 deaths and 1,225 injuries."

28. What does the author use to introduce the essay?
(A) quotation (B) example (C) question (D) historical reference (E) facts and statistics.

In May 1960, the FDA approved the sale of a pill that arguably would have a greater impact on American culture than any other drug in the nation's history. For women across the country, the contraceptive pill was liberating: it allowed them to pursue careers, fueled the feminist and pro-choice movements and encouraged more open attitudes towards sex.

Among the key players in the development of the drug were two elderly female activists who demanded a contraceptive women could eat like aspirin and then paid for the scientific research; a devout Catholic gynecologist who believed a robust sex life made for a good marriage and argued tirelessly that the Pill was a natural form of birth control; and a brilliant biologist who bullied a pharmaceutical company into risking a possibly crippling boycott to develop this revolutionary contraceptive. In describing the obstacles they all hurdled, *The Pill* presents a compelling account of a society in transition.

29. The passage would most likely to be found in a textbook on which of the following subjects:
(A) Social Studies (B) History (C) Biology (D) Writing (E) Psychology

30. It can be inferred from the passage that _____.
(A) the sale of the contraceptive pill was a success
(B) the sale contraceptive pill had strengthened the feminist movement
(C) the contraceptive pill was the trigger of AIDS
(D) no other drug could be as successful as *The Pill*
(E) the sale of the Pill has started the fight between biologist and gynecologist

Someday we will all have robots that will be our personal servants. They will look and behave much like real humans. We will be able to talk to these mechanical helpers and they will be able to respond in kind. Amazingly, the robots of the future will be able to learn from experience. They will be smart, strong, and untiring workers whose only goal will be to make our lives easier.

31. Which sentence from the paragraph expresses the main idea?

- (A) Someday we will all have robots that will be our personal servants.
- (B) We will be able to talk to these mechanical helpers and they will be able to respond in kind.
- (C) They will look and behave much like real humans.
- (D) Amazingly, the robots of the future will be able to learn from experience
- (E) Robots will be smart, strong, and untiring workers.

As the conflict in Iraq deepens, so has the debate about television coverage. Secretary of Defense Donald H. Rumsfeld complained on Friday that "media mood swings" was distorting the depiction of American military strategy. Actually, the movement was less up and down than across the ideological spectrum. In the initial phase, the loudest complaints about bias were lodged by antiwar groups frustrated that television gave scant attention to their protests. As casualties mounted, so did conservatives' laments about a liberal bias at the networks.

32. It can be inferred from this passage that _____.

- (A) there are conflicts between antiwar groups and the authority
- (B) both antiwar groups and the government are unhappy about bias shown on TV
- (C) the TV coverage is defending the U.S. policies
- (D) People have debated a lot about the complete coverage of the war
- (E) the media is very objective

Diagnosing Alzheimer's disease (AD) has always been an inexact science. Now, there may be a new tool to add to the box. Researchers from the Medical College of Wisconsin used magnetic resonance imaging (MCI) to scan the brains of 24 people. By measuring activity in the hippocampus, the first place AD develops, they could determine which patient were normal, which had AD, and which had mild cognitive impairment (MCI), a major risk factor for AD. Until now, doctors have relied on the patient's symptoms to distinguish between patients with MCI and people with AD; the new test could provide objective information about just how close an MCI patient is to eventually developing AD.

The test is years from perfection and AD drugs are still in trial stages. But the possibility of early detection is now closer.

33. What might be a good title for this passage?

- (A) Alzheimer's Advance (B) Alzheimer's Cause (C) The Testing Process of Alzheimer
- (D) the test and AD drugs (E) the comparison between AD and MCI

34. The new test is served to be _____.

- (A) a perfect treatment for AD patients now
- (B) a pre-trial for a new drug
- (C) a research tool for collecting data for the better treatment for AD patients
- (D) detecting the relationship between the AD patients and the current drugs used for AD
- (E) a possible early detection about how a MCI patient would develop AD

The Snowy Owl is a bird of Arctic tundra or open grasslands and fields. They rarely venture into forested areas. During southward movements they appear along lakeshores, marine coastlines, marshes, and even roost on buildings in cities and towns. In the Arctic, they normally roost on pingaluks (rises in the tundra) and breed from low valley floors up to mountain slopes and plateaus over 1,000 meters (3,000 feet) in elevation. When wintering in the Arctic, they frequently wind-swept tundra with little snow or ice accumulation. At more southern latitudes they typically frequents agricultural areas

35. The passage is about the Snowy Owl's _____.

- (A) classification (B) hunting (C) breeding (D) habitat (E) distribution

Another noteworthy trend in twentieth-century in the United States has been the use of folk and popular music as a base for more serious composition. The motivation for these borrowings from traditional music might be a desire on the part of a composer to return to simpler forms, to enhance patriotic feelings, or to establish an immediate rapport with an audience. For whatever reason, composers such as Aaron Copland and Charles Ives offered compositions featuring novel musical forms flavored with refrains from traditional Americana. Copland drew upon folk music, particularly as sources for the music he wrote for the ballets Billy the Kid, Rodeo, and Appalachian Spring. Ives employed the whole gamut of patriotic songs, hymns, jazz, and popular.

36. The paragraph preceding this passage most probably discusses _____.

- (A) nineteenth-century music (B) one development in music in the last century
(C) the works of Aaron Copland (D) the history of folk and popular music

37. Which of the following best describes the main idea of the passage?

- (A) Traditional music flavored some American musical compositions in the twentieth century.
(B) Ives and Copland have used folk and popular music in their compositions.
(C) A variety of explanations exist as to why a composer might use traditional sources of music
(D) Traditional music is composed of various type of folk and popular music.

38. It can be inferred from this passage that the author is not sure _____.

- (A) when Ives wrote his compositions (B) that Ives and Copland actually borrowed from traditional music
(C) why certain composers borrowed from folk and popular music
(D) if Copland really featured new musical forms

39. Which of the following is NOT listed in the passage as a source for Ives's compositions?

- (A) National music (B) Religious music (C) Jazz (D) American novels

40. The passage would most probably be assigned reading in which of the following course?

- (A) American History (B) The History of Jazz (C) Modern American Music (D) Composition

II. Essay. Please write an essay in about 150 words. 20 points.

Topic: Some people dream of reaching unlikely goals, while other people set more reasonable and reachable goals. Which kind of person do you tend to be? Please give examples to support your statement.

1. Insulin 對細胞能增加肝糖 (glycogen)合成，描述其訊息傳遞路徑。(10%)
2. 訊息傳遞通常是短暫(transient)。試述在 epinephrine 結合 7-transmembrane receptor 傳遞之訊息如何 feedback desensitization or inactivation。(10%)
3. 描述 glycolysis 途徑如何分解 glucose 形成 pyruvate，畫出結構及寫出名稱。(10%)
4. 描述偶數脂肪酸如何經由氧化產生能量。(10%)
5. 酵素之抑制劑之作用機制可分為 uncompetitive 或 competitive，利用 double reciprocal plot 解釋如何利用 kinetic parameter 區分此二作用機轉。(10%)
6. 試描述任意三種純化蛋白質(protein purification)之方法。(10%)
7. 當 clone 一個新的基因，欲研究其 encoded protein 之功能，通常須使用 expression system 去大量表現此一蛋白質。目前較常用的有 E. coli system，Pichia system，Baculovirus system，mammalian cell system，比較這些系統之優缺點。(10%)
8. Small interference RNA 為 2002 年生物醫學界重大技術突破，試描述此技術之原理及重要性。(10%)
9. 描述真核細胞(eucaryotic cell)之轉錄(transcription)，包含如何 open chromatin mechanism 及 transcriptional factors recruitment 之機轉。(10%)
10. 真核細胞蛋白質轉譯(translation)後必須送到各個不同位置，如 cell membrane，nucleus，endoplasmic reticulum 執行功能，這些蛋白質是如何被送到正確位置(protein sorting)，描述之。(10%)