中國醫藥大學108學年度

學士後中醫學系入學招生考試

英文 試題

考試開始鈴響前，不得翻閱本試題！

★考試開始鈴響前，考生請注意：

一、不得將智慧型手錶及運動手環等穿戴式電子裝置攜入試場，違者扣減其該科成績五分。

二、請確認手機、電子計算機、手提袋、背包與飲料等，一律置於試場外之臨時置物區。手錶的鬧鈴功能必須關閉。

三、就座後，不可擅自離開座位。考試開始鈴響前，不得書寫、劃記、翻閱試題本或作答。

四、坐定後，雙手離開桌面，檢查並確認座位標籤與電腦答案卡之准考證號碼是否相同？

五、請確認桌椅下與座位旁均無其他非必要用品。如有任何問題請立即舉手反映。

★作答說明：

一、本試題（含封面）共 **10** 頁，如有缺頁或毀損，應立即舉手請監試人員補發。

二、選擇題答案請依題號順序劃記於電腦答案卡，在本試題紙上作答者不予計分；電腦答案卡限用 2B 鉛筆劃記，若未按規定劃記，致電腦無法讀取者，考生自行負責。

三、選擇題為單選題，共 50 題，每題 2 分，共計 100 分，請選擇最合適的答案。

四、本試題必須與電腦答案卡一併繳回，不得攜出試場。

I. Vocabulary and Phrases

Part 1: Choose the <u>BEST</u> answer to complete each sentence.

1. Although the brain ____ only 2 percent of our body mass, it consumes approximately 25 percent of all energy required to run our body everyday.
   (A) ignites (B) dilutes (C) permits (D) baffles (E) represents

2. Japanese military personnel ____ a lone fisherman who they said had unlawfully cast a net from the shore.
   (A) extended (B) triggered (C) permeated (D) confronted (E) mitigated

3. Concepts such as joy, team, and happiness are general notions of entities, objects, behaviors, actions, or states of being that share similar ____.
   (A) means (B) associates (C) structures (D) expressions (E) attributes

4. E. M. Forster's story, "The Machine Stops", has been acknowledged as a precursor of later dystopian fictions, and thus has been regarded as a ____ portrayal of late twentieth-century cyber networks.
   (A) prescient (B) privileged (C) proactive (D) predictable (E) precautious

5. Stronger together, Ruth Bader Ginsburg teams up with her husband, Martin Ginsburg, to fight the legal case that ____ her into one of the most important public figures of our time.
   (A) segregates (B) integrates (C) catapults (D) moralizes (E) fossilizes

6. The limitation in working memory capacity suggests that people learn more easily through instructional methods that avoid overloading it with ____ information.
   (A) justifiable (B) superfluous (C) ostentatious (D) suppressive (E) obsessive

Part 2: Choose the word or phrase that is <u>CLOSEST</u> in meaning to the underlined word or phrase in each sentence.

7. This professor's lecture successfully **<u>arose</u>** my curiosity about middle-east history.
   (A) piqued (B) aligned (C) partitioned (D) dispatched (E) dissected

8. This year has tested the financial industry's ability to **<u>weather</u>** recession.
   (A) involve (B) delineate (C) withstand (D) advocate (E) proclaim

9. The lawyer tried to address the clients' problems, but he found them keep **<u>going off on a tangent</u>** and couldn't understand what their true complaints were.
   (A) wandering (B) withdrawing (C) withering (D) weakening (E) winking

10. It is a mistake to **<u>stint</u>** the quantity of heat piping, since it is far more economical and better for the plants to have a larger surface heated moderately than a smaller surface heated excessively.
    (A) be too cautious with (B) be too sparing with (C) be careless about
    (D) be too picky about (E) be obsessed with

II. Grammar and Structure: Choose the <u>BEST</u> answer to complete each sentence.

11. These researchers started to isolate variables of interest by matching participants in each of the groups on all relevant variables except for the one ____.
(A) at will (B) in question (C) at length (D) at ease (E) on balance

12. Only after these issues are addressed ____ this option.
(A) I will consider (B) were I to consider (C) will I consider
(D) I am to consider (E) to consider

13. ____ we want to explore whether children's exposure to the Internet increases their verbal behaviors, we should conduct an empirical study.
(A) To suppose (B) Supposing (C) Supposed (D) Suppose (E) Being supposed

14. This prominent scholar trained a great number of clinical psychologists, many of ____ established their own clinics or laboratories.
(A) which (B) that (C) who (D) whom (E) whose

15. With small, sharp strokes—working blindly, because of the blood and the poor light—I cut down through the overlying fat and tissue until I felt the blade ____ against the bony cartilage.
(A) to scrape (B) to be scraped (C) been scraped (D) being scraping (E) scrape

16. Which of the following is grammatically accurate?
(A) Contrary to what many people believe, copyright and patents are two different things.
(B) The application of copyright to wording only, and is therefore automatic on publication.
(C) If I came up with a new way of teaching a language, and someone presented it as their own, there won't be much I could do.
(D) I once knew someone who had thought of a really good classroom technique, which he presented at a conference, only to be upsetting at seeing someone else use it afterwards.
(E) He had believed that it had "his" once he had presented it. Of course, with hindsight he realized that it would have been better to publish the technique before presenting it.

17. Which of the following is grammatically accurate?
(A) Born and raised in British Guiana, Grace Nichols is working as a freelance journalist after receiving a diploma in communications from the University of Guyana in 1977.
(B) In her poems, Nichols memorializes the uprooting of Africans and their languages where slavery brought those peoples to the West Indies, when a new tongue grew "from the root of the old one."
(C) The new tongues melding English with African and European languages, Nichols celebrates it with a vibrant medium for literature.
(D) She writes of black immigrants' reverse colonization off the English language and off English society.
(E) In her poetry, the speaker—appropriating and reversing cultural stereotypes—transforms London's landscape by virtue of her robust physical, verbal, and cultural presence.

18. Which of the following is grammatically accurate?
(A) The papers in this issue adopt a broad and diverse approaches to teach scientific thinking.
(B) Lilienfeld discussed 50 psychological and psychiatric terms that were inaccurate, commonly misused, or both.
(C) They discussed why these terms were often used incorrectly, and was providing students and instructors alike with strategies to correct misconceptions of the terms.
(D) Matute demonstrated the role of the illusion of causality to fostering continued belief in pseudoscience and misinformation.
(E) An overview of the innovative experiments in the Matute lab show that an understanding of the illusion of causality can promote of scientific thinking.

19. All of the following are grammatically accurate **EXCEPT** which one?
(A) The current ecological crisis demands a radical redesign of how we live and organize our societies.
(B) These changes are in urgent need and thus have to be implemented immediately.
(C) By greening our cities with street trees, urban parks, and community and rooftop gardens, we can keep ourselves cooled, and fostering happiness and social connection.
(D) Thanks to the heat generated by traffic and industrial activities, urban air temperature is often higher than in rural environments.
(E) Hotter cities compel urban citizens to opt for air conditioners in order to stay cool, which further strains energy demands and worsens the heat in the city.

20. All of the following are grammatically accurate **EXCEPT** which one?
(A) The destruction of Saint Patrick cathedral is lamentable.
(B) This historical building has been largely destroyed by fire; however, we should not despair.
(C) We are immersed in a Western way of thinking that equates authenticity with preserving the original, natural materials used to create an object or building.
(D) Some societies have quite different notions of what are authenticity.
(E) Several world-famous iconic buildings have been successfully restored, sometimes after great damage, and are today appreciated by millions of people.

III. Cloze

Questions 21-25: Choose the BEST answer for each blank in the passage.

Automakers typically display dozens of plug-in hybrid and electric vehicles every year at the Washington Auto Show. But the prevalence of electric vehicles (EVs) at the car show would only __21__ their deep unpopularity with American people. Despite EVs' crucial role in reducing air pollution, they only take up just around 2% of car sales in the US last year. In stark contrast, gas-guzzling SUVs, sedans, and trucks make up more than 70% of the market. So why American consumers generally do not find EVs __22__? A recent research shows that Americans' lack of interest in EVs can be attributed to the __23__ of reliable sources of information they trust about how EVs can improve the environment. Environmental psychologists __24__ that more American would purchase

more EVs if they receive sufficient credible information about their benefits at the point of decision. Prospective consumers may not care too much about how EVs can minimize greenhouse gas __25__, but they would definitely respond to possibilities about how EVs will save them big bucks in the future.

21. (A) speculate (B) transcribe (C) disseminate (D) underscore (E) rectify
22. (A) responsible (B) favorable (C) tenable (D) undeniable (E) questionable
23. (A) paucity (B) spectrum (C) invitation (D) density (E) hazard
24. (A) imitate (B) retain (C) maintain (D) entertain (E) constrain
25. (A) equivalents (B) instruments (C) measurements (D) trajectories (E) emissions

Questions 26-30: Choose the BEST answer for each blank in the passage.

Two decades of analyses have produced rich insights as to how the law should be applied to regulate the Internet's peculiar characteristics. But, in the meantime, Internet-related technology has not __26__. The same public and private institutions that developed the Internet, from the armed forces to search engines, have __27__ a significant shift toward developing robotics. An article to be published in the upcoming issue of *California Law Review* discusses how the cyber-law and policy should respond to the new transformative robotic technology. Robotics has essential qualities different from those of the Internet, and accordingly will __28__ distinct legal issues. For instance, robotics combines, for the first time, the promiscuity of data with the capacity to do physical harm; robotic systems accomplish tasks in ways that cannot be anticipated in advance; and robots increasingly __29__ the line between person and instrument. Nonetheless, robotics, being automatic in nature, may still prove "exceptional" in the sense of __30__ systematic changes to law, institutions, and the legal academy.

26. (A) kicked off (B) stood still (C) played dead (D) hanged loose (E) caught up
27. (A) initiated (B) insinuated (C) implemented (D) inflated (E) lubricated
28. (A) conflate (B) install (C) assemble (D) narrate (E) raise
29. (A) exchange (B) intervene (C) blur (D) isolate (E) embark
30. (A) preventing (B) stopping (C) masking (D) causing (E) indicating

IV. Discourse structure

Questions 31-35: Choose the BEST answer from the box below for each blank in the passage.

(A) Thanks God that Notre Dame is a well-documented building in France.
(B) This is not the first time Notre Dame has suffered from major fire damage; and the reconstruction project to come is neither the first nor the last for the cathedral.
(C) Nonetheless, the restoration project may require a tediously long and delicate operation.
(D) Small objects such as round windows may simply require the restoring team to replace the original fragments and to recompose them.
(E) Most of the heavy artifacts that could not be moved, such as the altar, were also destroyed.

The world shares the sorrow of the French people as Paris' treasured Notre Dame cathedral was in flames. __31__ The cathedral experienced several catastrophic damages after the French Revolution, and then a major controversial restoration in the mid-19th century. So, what has been lost in this recent

fire accident? The fire destroyed the roof, the spire (the pyramidal structure on the top of the church tower), permanent paintings and sculptures, and many other historical artifacts. Not surprisingly, all the timber elements are gone due to the heat of the blaze. __32__ What have been saved? Most of the stone fabric is not impaired thanks to the effort of the fire brigades. Additionally, most of the religious objects and artifacts that could be moved are not affected. For instance, the bells—an important symbol and artifact of the cathedral—managed to escape from the worst destruction. How will experts repair Notre Dame cathedral? __33__ Reconstruction of major or large objects—such as the big rose windows—will demand a structural rebuilding work which can take years. __34__ French people have accumulated many good illustrative or photographic documentation of the whole cathedral. __35__

Questions 36-40: Choose the BEST answer from the box below for each blank in the passage.

(A) These participants all did not understand the novel sounds of that language they heard.
(B) They found that exposure to music note prompted activity on both sides of the brain.
(C) Both inputs continue to influence human's perception of pitch after birth.
(D) The melody of the pitch and words both help convey the message to them.
(E) However, the above prevailing view was challenged by some researchers by the late 1990s.

In the past, scholars used to conceptualize our brain in a dichotic view. While the left hemisphere is responsible for the analysis and processing of language-related information, the right hemisphere takes care of non-linguistic information such as music. __36__ For instance, an eminent female neuropsychologist, Diana Deutsch, argues that our sensitivity to rhythm and melody helps us learn to talk; language and music are interconnected "partners in the brain" and are complementary in our cognitive maturation process. Her claim is motivated by the following scientific observations.

Stefan Koelsch and his colleagues presented people with sequence of chords and used functional magnetic resonance imaging (fMRI) technology to monitor their brains. __37__ Notably, active neuron activity was detected in the core brain area traditionally associated with language processing. This finding entails that the brain areas governing music and language overlap. This neurological overlap can be attributed to an etymological common ground between the two—they are governed by systematic rules, in which constituent elements (e.g., music note vs. word) are hierarchically organized into sequences (e.g., melody vs. sentence).

Researchers from Northwestern University found that an awareness of music can make people more attuned to the melody of speech. In a 2007 investigation, these researchers exposed English speakers to Mandarin speech sounds and employed electrodes placed on the scalp to measure the electrical responses in their auditory brain stem. __38__ The researchers observed that those who had received some musical training consistently exhibited a much stronger electrical response to the speech in the auditory brain stem than those who had no music training.

Focusing on prenatal babies, some German neuroscientists found out that both language and musical prosodies can penetrate the womb. __39__ Babies smile when hearing high-pitch discourse that indicates approval and praise, and become depressed when hearing low-pitched prohibitions. __40__ Not only can exposure to music enhance our language skills, but the speech we hear also influences our perception of music.

V. Reading

<u>Questions 41-45</u>: Choose the <u>BEST</u> answer to each question below according to what is stated and implied in the following passage.

The discovery of a recent research published in *Nature* shows that although electrophysiological monitoring could not detect any neural activity that reflects consciousness in mammalian brains, it did pick up cellular functions hours after death. In this study, researchers obtained dead pigs from a state-run slaughterhouse; they then connected 32 dead pigs to an artificial perfusion system called Brain*Ex*. The brains of these pigs were removed from the skulls. As a result, these dead pigs would not have the ability to perceive the environment and experience sensations such as pain. But, incredibly, Brain*Ex—a computerized* system utilized to control the blood flow, temperature, and perfusion, was capable of restoring circulation to major arteries and small blood vessels in pig brains. Notably, a drug used to enhance the blood flow in people's brain also successfully dilated pig blood vessels. Electrodes inserted into pig brain tissues even detected activities between and among cells.

Findings of this research raise challenges to a long-standing assumption that brains will be irrevocably damaged soon after blood stops circulation. Importantly, the discovery of this research exacerbates the tug-of-war between the effort to salvage a person's life and the endeavors to remove and implant the organs in another body. Typically, practitioners use various rules of thumb, such as "declare death after 30 minutes of unsuccessful resuscitative efforts", as the reference point for death determination and for switching from life-saving effort to "organ-saving" effort (for transplantation purposes). But the aforementioned rules of thumb have not been clear-cut. In most countries, most organs for transplant have been extracted from people who have been pronounced brain dead; however, recently, more and more people who are declared dead after their heart and lungs have stopped working (circulatory death) are also eligible for organ donation. Apparently, the standards for death determination and organ transplantation are still not unequivocally accepted by clinicians.

The debate on life and death will continue. Despite the lack of consensus, the transplant community, scientists, and medical professionals and other stakeholders generally agree that indisputable, unambiguous transplantation guidelines that can help protect the interests of individuals for whom recovery is a possibility and the interests of potential organ recipients are **<u>warranted</u>**. Such transplantation guidelines will help medical professionals to make indisputable decisions on the timing to switch from saving someone's life to saving their organs for the benefit of another person. In any case, this decision on "life and death" should not come down to a moral decision.

In addition, medical professionals should also make joint effort to optimize the resuscitation technology. If such a technology gets improved, people who are pronounced brain dead may become candidates for brain resuscitation, rather than candidates for organ transportation. In this regard, it would be harder for families to accept that further resuscitative intervention performed on their love ones is futile. In our view, as the science of brain resuscitation progresses, the decisions to revive patients from unconsciousness or apparent death might increasingly become more reasonable; and the decisions to give up resuscitation in favor of transplanting organs might seem less so.

41. What's the **primary** objective of this passage?
(A) It revisits the outdated regulations on the general medical ethics for clinicians.
(B) It examines the dilemma between futile resuscitative efforts and patients' free will.
(C) It highlights an increasingly heightened tension between potential organ donors and medical practitioners.
(D) It presents a skeptical view on the advances in electrophysiological science.
(E) It discusses the controversies regarding death determination and organ transplantation.

42. According to the article, which of the following statements is **NOT** true?
(A) The "circulatory death" has not been regarded as an appropriate death determination option.
(B) Family members and clinicians might still not have the consensus on "the" right timing to stop resuscitative efforts.
(C) Electrophysiological evidence has established that human beings stop having consciousness after death.
(D) Medical professionals generally agree that decisions for death determination should not be a moral issue.
(E) The transplant community and medical professionals agree that there is a need to establish an organ transplantation protocol.

43. How do you describe the author's attitude toward the advance in resuscitation technology?
(A) Indifferent (B) Optimistic (C) Doubtful (D) Neutral (E) Biased

44. Which of the following should be the essential feature for the transplantation guidelines?
(A) value-laden and thought-provoking language
(B) double-barreled and multi-dimensional principles
(C) uncontroversial and sharply defined criteria
(D) ideological and philosophical grounds
(E) vivid and figurative language

45. Which of the following is closest in meaning to the word "**warranted**" in the passage?
(A) appreciated (B) employed (C) converted (D) needed (E) approved

Questions 46-47: Choose the BEST answer to each question/statement below according to what is stated and implied in the following passage.

The whole prospect and outlook of humankind grew immeasurably larger, and the multiplication of ideas also proceeded at an incredible rate. This vast expansion was unhappily not accompanied by any noticeable advance in the stature of human beings, either in their mental faculties, or their moral character. Our brain got no better, but it buzzed more. The scale of events around us assumed gigantic proportions while we remained about the same size. By comparison therefore we actually became much smaller. We no longer had great individuals directing manageable affairs. The need was to discipline an array of gigantic and turbulent facts. To this task we have certainly so far proved unequal. Science bestowed immense new powers on human beings and at the same time created conditions which were largely beyond our comprehension and still more beyond our control. While people

nursed the illusion of growing mastery and exulted in their new trappings, they became the sport and presently the victim of tides, and currents, of whirlpools and tornadoes amid which they were far more helpless than they had been for a long time.

46. All of the following are implied by this passage **EXCEPT**
(A) critiquing humankind's hubris and lack of vision
(B) lamenting humankind's dwindling grandeur
(C) saluting humankind's superiority over science
(D) worrying about humankind's possibly bleak future
(E) acknowledging humankind's unprecedented advances

47. Based on this passage, which of the following can **BEST** describe today's digital age?
(A) The true value of any technological progress is measured by human's advancement.
(B) Digital technology leads to complete disruption and unwanted catastrophe.
(C) The current digital revolution will unequivocally disrupt human minds.
(D) Human's mental capacities already catch up with the acceleration of digital technology.
(E) The balance between technology and human faculties would continue to be a challenge.

Questions 48-50: Read the following article from which three paragraphs have been removed. Choose the BEST paragraph from those in the box below for each gap in the article.

(A) In 1935, Hodgkin discovered that it was essential to keep the crystals wet with the "mother liquor" while X-raying them. If the liquid dries out, the molecules start to lose their ordered arrangement, and when hit with X-rays, they don't give a clear pattern of spots.

(B) Hodgkin's legacy is indeed multifaceted. She was not only an exceptional scientist but also was, and continues to be, an inspirational role model to generations of researchers in the UK and elsewhere, both male and, very importantly, female. Changes in our culture in the last 10 or 15 years appear to have contributed to attention deficiency syndrome.

(C) Hodgkin became interested in chemistry and in crystals at about the age of 10, and this interest was encouraged by Dr. A.F. Joseph, a friend of her parents in the Sudan, who gave her chemicals and helped her during her stay there to analyze ilmenite.

(D) Hodgkin's work also had an enormous impact on the treatment of diabetes. In 1969, after 35 years of enormously tenacious and brilliant work, she solved the 3D shape of the insulin molecule. Insulin is an important hormone used by the body to process sugars in food, and understanding its structure has helped untangle the mechanism of its action, with critical implications for human diabetes control.

(E) Hodgkin is fondly remembered by her research students, who included many women. She was also involved in a wide range of peace and humanitarian causes and was especially concerned about the welfare of scientists in the Soviet Union, China, and North Vietnam.

Dorothy Crowfoot Hodgkin may be the most famous British scientist of whom most people have never heard. As such, she would be a very appropriate face for the new £50 note, on which the Bank of England wants to feature a picture of a scientist.

Hodgkin was the foremost leader and innovator in her field, and the major impact of her work led to her becoming the only female British scientist to win a Nobel Prize (so far). The 1964 award recognized her work in chemistry using a technique known as X-ray crystallography to find out the three-dimensional shapes of penicillin (1945) and vitamin B12 (1955).

Accurate knowledge of the shape of penicillin was pivotal in understanding how it could overcome bacterial infections. As a result, Hodgkin's work is still important in the development of new antibiotics as some bacteria have developed resistance to existing drugs.

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In addition to her accomplishment in diabetes treatment, key to Hodgkin's work was the technique of X-ray crystallography, a way of working out how a complex molecule is arranged in three dimensions. The way we find out this 3D shape is by growing tiny crystals of a substance so that its molecules are all lined up in an orderly array. We then hit this array with X-rays and capture the resulting "diffraction pattern" of spots that indicate how the molecules interfere with the beam. By capturing patterns from each side of the crystal and performing some mathematical computations, we can eventually get the average of the shapes of all the molecules, highlighting all the common features. This gives us a picture of the density of electrons in the molecule in 3D space and show how the atoms of the molecule are arranged.

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Hodgkin's pioneering work in crystallography gave birth to a whole new field that applied the methods she developed to large biologically important molecules, including DNA and proteins. We now know the 3D shapes of over 139,000 biological molecules, and all the information is stored in a completely open access database called the Protein Data Bank.

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She was also very active in standing up for her core beliefs as a pacifist. For 12 years she was president of Pugwash, an organization founded in 1957 dedicated to reducing the danger of armed conflict and which sought peaceful solutions to global security threats. She even inspired her former student Margaret Thatcher despite their differing politics.

Her life was a shining example to many so it would be entirely appropriate for us to honor her great scientific achievements, and help give her the public recognition she deserves, by putting her image on our new £50 notes.