

本科目 **不可以** 使用計算機本科目試題共 7 頁，本頁為第 **1** 頁

說明：

1. 本試卷以 100 分為滿分，分四部分。一至三部分為單選選擇題，共 58 題，題號連續，佔 80 分，答錯不倒扣，配分方式請見各部分說明。第四部分為非選擇題，佔 20 分。
2. 請將答案填寫於答案卷。

I. Vocabulary (20 points): Choose the best answer according to context. One answer 1 point.

1. *Excellence Without a Soul*, a book written by a Harvard professor, reveals that just focusing on good grades will produce many brilliant persons without _____, the ability to be in others' shoes.
(A) hostility (B) fertility (C) morality (D) empathy (E) ecstasy
2. If people want to have the courage to meet the demands of reality, they should have _____, a firm adherence to a moral code of completeness.
(A) intuition (B) integration (C) integrity (D) irrigation (E) inspection
3. To get a second degree in medicine sponsored by the government, one needs to cater to the imbalance between city and country, and to be willing to walk the extra mile for the _____.
(A) underweight (B) understandable (C) undergraduate (D) underneath (E) underprivileged
4. On January 7th David Bennett became the first person to have a heart _____ successfully into him from a pig, though he survived two months only. This kind of procedure is also known as xenotransplantation.
(A) implemented (B) implicated (C) imposed (D) implied (E) implanted
5. If a physician chooses his/her specialty on (human) skin, s/he would be officially called a _____.
(A) dermatologist (B) radiologist (C) plastic surgeon (D) gynecologist (E) obstetrician
6. Drones, the remote-controlled non-pilot flying objects, cannot be used in warfare as aircraft _____.
(A) hermits (B) carriers (C) occupants (D) veterans (E) rascals
7. A large number of refugees fleeing from their own war-ridden or corrupt countries to other ones might eventually arouse _____ from their recipient counterparts.
(A) claustrophobia (B) aerophobia (C) xenophobia (D) homophobia (E) pathophobia
8. A prosecutor should take an entirely _____ stance. S/he should give the suspect(s) the "benefit of doubt" before the verdict is reached.
(A) imperative (B) impartial (C) impulsive (D) implicit (E) imperial
9. _____ medicine is a fairly important branch of medicine which would aid the prosecutor to investigate a criminal case leading to murder, manslaughter, or serious casualties. However, because of its tough working environment, few people are interested in it.
(A) Criminological (B) Forensic (C) Convicted (D) Judicial (E) Toxicological
10. Even nowadays, patients of the medical branch of _____, which deals with mental health, are often stigmatized.
(A) psychic (B) psychology (C) psychiatry (D) psychedelic (E) psychoanalysis
11. A person with both nearsightedness and presbyopia usually needs a pair of _____.
(A) bindings (B) bilaterals (C) bifocals (D) blizzards (E) binoculars
12. The _____, as a physiological term, is the round colored part of a person's eye which consists of two layers.
(A) iris (B) pupil (C) retina (D) gland (E) orbit
13. Heavy 3C device users should be careful not to be bothered by a condition, an increasingly common eye disease known as fly floaters, which is caused by the clouding of the liquid, a _____-like substance inside the eye.
(A) gum (B) soy (C) dim (D) wig (E) gel

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14. Nowadays in our society teachers don't enjoy the respect that is _____ doctors and lawyers.
(A) adhered to (B) addicted to (C) accorded to (D) adjacent to (E) anxious to
15. Scientists have shown that hunger isn't just something _____. Hunger during childhood can have a ripple effect that we are only just beginning to understand.
(A) transient (B) transcendent (C) translucent (D) tranquil (E) transit
16. A good doctor, in order to protect him/herself, should know how to become like a _____ as if in an activity of moving fast on foot.
(A) sober (B) sneer (C) skipper (D) sprinter (E) slaughter
17. Today, nearly half of the world's population is at risk from malaria. It kills more than 400,000 people a year, most of them in Africa. But even cooler places, such Britain, have not always been _____.
(A) spared (B) blocked (C) hindered (D) revealed (E) circulated
18. He started playing wheelchair basketball after he was left _____ from the waist down.
(A) parachuted (B) partitioned (C) perished (D) penetrated (E) paralyzed
19. Polypharmacy, often defined as the regular use of five or more drugs by one patient, is _____ and is expected to grow as life expectancy increases and the global population ages.
(A) down the drain (B) up to now (C) on the rise (D) off the road (E) against all odds
20. In order for the body to produce a safe _____ response, it is important to control the amount of antigens in the vaccines.
(A) antibody (B) antidote (C) antipathy (D) anticlimax (E) antithesis

II. Cloze (16 points): Choose the best answer. One answer 1 point.**Passage A**

According to the WHO (World Health Organization), a threat similar to penicillin ____21____ is very real. Many experts fear that it's only a matter of time before we see the ____22____ of a superbug—a very powerful type of bacteria that normal ____23____ cannot kill—capable of wiping out huge numbers of people.

Perhaps the scenario is happening at this very moment, only that the leading role is played by COVID-19, along with its numerous ____24____. As the most recent one developed its own different versions, we should learn to live peacefully with all other creatures traditionally considered bad to the humans, instead of seeking to ____25____ them. We have no right to be so anthropocentric.

21. (A) abuse (B) ordeal (C) elapse (D) gospel (E) kernel
22. (A) emerge (B) emerging (C) emergence (D) emergency (E) emergent
23. (A) prescriptions (B) polytechnics (C) predecessors (D) practitioners (E) pharmacies
24. (A) determinants (B) variants (C) compliments (D) nutrients (E) suppliants
25. (A) eradicate (B) advocate (C) suffocate (D) complicate (E) duplicate

Passage B

There are around 39 million blind people in the world. But ____26____ do people realize that perhaps half of those affected by blindness could be cured, simply by removing the cataract which causes it. It is a very common operation in many countries, and only very ____27____ does the patient fail to recover good sight. However, until recently the ____28____ did cost quite a lot and was too expensive for sufferers in developing countries. Then entered Dr. Sanduk Ruit, a doctor from Nepal, who ____29____ the system for conducting cataract surgery cheaply and efficiently.

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26. (A) few (B) none (C) neither (D) little (E) less
27. (A) periodically (B) normally (C) rarely (D) intermittently (E) nearly
28. (A) repetition (B) repayment (C) procedure (D) pension (E) pamphlet
29. (A) deteriorated (B) degenerated (C) preserved (D) revolutionized (E) magnified

Passage C

A recent film *Still Alice* focused on a more and more common chronic and perhaps irreversible disease—senile dementia. In our era of ___ 30 ___ society, the phenomenon of “losing one’s mind” is not rare. Even professors or physicians—traditionally considered smart people—are not ___ 31 ___ from it.

The cause and progression of senile dementia—commonly known as Alzheimer’s, are currently not yet ___ 32 ___ understood. Research indicates that this disease ___ 33 ___ plaques and tangles in the brain. But the ___ 34 ___ after the patient’s case is confirmed to the patient him/herself or his/her closest relatives is huge, and hard to accept. To an old patient whose mental state has retarded back to his/her childhood, the ___ 35 ___ must utilize great wisdom and humor, otherwise the latter will break down first. That is why the government should ___ 36 ___ to take care of them.

30. (A) aging (B) fading (C) waging (D) scrolling (E) mellowing
31. (A) exotic (B) exterior (C) exempt (D) extreme (E) extinct
32. (A) soon (B) once (C) even (D) well (E) thus
33. (A) associates
(B) associates with
(C) is associated
(D) is associated with
(E) was associating
34. (A) impact (B) stroke (C) encounter (D) knuckle (E) tremor
35. (A) housekeeper (B) breadwinner (C) caregiver (D) waged worker (E) jobholder
36. (A) condemn (B) lavish (C) withhold (D) strive (E) endorse

III. Reading comprehension (44 points): Please read the following 3 separate passages (A, B, C) closely and then choose the best answer to each question according to the information provided. 2 points per answer.

Passage A

Those who prepare themselves for a medical career may have heard of the Hippocratic Oath and its modern version “Declaration of Geneva,” first established in Geneva, 1948, now known for its 2017 revision after amendments and editorial works. Here is an excerpt of this modern version in English:

At the time of being admitted as a member of the medical profession:

I solemnly pledge to consecrate my life to the service of _____;

I will give to my teachers the respect and gratitude that is their due; [. . .];

My colleagues will be my sisters and brothers;

I will not permit considerations of age, disease or disability, creed, ethnic origin, gender, nationality, political affiliation, race, sexual orientation, social standing or any other factor to intervene between my duty and my patient; [. . .];

I make all these promises solemnly, freely and upon my honor.

But perhaps few people have heard of “Declaration of Taipei”—agreed in 2016 but not yet

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officially approved by the WMA (World Medical Association). This new declaration tries to achieve a balance between the rights of individuals giving their tissues or data for research and other purposes based on confidentiality and privacy rules while at the same time recognizing that health data has become a very powerful tool for increasing knowledge.

According to the WMA, scenarios have already existed for the use and misuse of health data and biobanks. Therefore, the Association came to the conclusion that the major risk scenarios may not _____ science, but may be caused by the commercial, administrative or political use of such data.

Therefore, the “Declaration of Taipei” aims to address any use of health databases and biobanks excluding individual treatment and is not restricted to research. As physicians are the primary custodians of confidential health information, they should feel an obligation towards their patients and other persons who entrust them with their data and specimens.

37. The word “consecrate” in the excerpt is closest in meaning to _____.
(A) dispose (B) conceive (C) commit (D) esteem (E) torment
38. The most appropriate word for the blank in the excerpt is _____.
(A) divinity (B) maturity (C) opportunity (D) vanity (E) humanity
39. “I will give to my teachers the respect and gratitude that is their due.” In this part of the oath, the expression “their due” is closest in meaning to _____.
(A) something they expand
(B) something they demand
(C) something they warrant
(D) something they uphold
(E) something they deserve
40. According to the oath, which of the following considerations may be allowed to come between doctors and patients?
(A) discrepancy (B) prestige (C) impairment (D) sexuality (E) confidence
41. In the passage, which of the following is **NOT** included in the description about “Declaration of Taipei”?
(A) The rights of patients giving their tissues or data.
(B) Restricted access to health databases for research.
(C) Biobanks being excluded from individual treatment.
(D) Physicians’ duty toward patients’ health information.
(E) Physicians as the primary custodians of health data.
42. Which of the following is **NOT** “the risk scenarios” indicated in the second to last paragraph?
(A) Data is sold to partner hospitals for research.
(B) Data is used to gain insights for strategic planning.
(C) A patient’s record is unintentionally disclosed.
(D) A person’s medical history is used against him/her.
(E) A health sector forwards data to the wrong person.
43. The most appropriate words for the blank in the second to last paragraph would be _____.
(A) invest in (B) bear upon (C) follow by (D) occur with (E) result from

Passage B

How would big data play a role in the twenty-first century medicine? To answer this question, we may learn something from the forerunners—the Dutch and the Japanese. Though from very different cultural contexts, both collect big data not only to analyze the existing problems, but also to predict the future curve concerning both personal and public health wisely.

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It is true that the total population in Taiwan is decreasing, but people are also living longer. Therefore, a lot of the Public Health Insurance payments go to the aging and the unhealthy disproportionately. To stop this imbalanced money drain, we should promote the preventive medicine, reduce bedridden days, and encourage the signing of donor cards—though the last one might be a cultural taboo difficult to break in the short term.

Meanwhile, there is another factor—our contemporary society is getting more and more M-shaped. On the one hand, the rich get richer; on the other, the poor become poorer. This results in their different types of unhealthiness: the rich would get more obese, leading to chronic diseases such as cardiovascular ones, or diabetes, as well as mental problems; the poor, confronted with worsening living conditions, might develop alcoholism, drug addiction, and another set of mental illnesses. Not to mention the middle class who suffer yet another set of psychosomatic problems.

Hence to respond to the future extremes of the health spectrum, the government's policy to freeze the quota of total physicians to just 1,300 graduates ever since 2008 needs reconsideration now. How should postgraduate medical students prepare themselves to be future physicians? Even though physician training is bound to be tough, and students (candidates) are under constant distress, potential trainees should first brace themselves for the ever-changing world and adjust themselves. Second, they should constantly remind themselves of their original motive—to save people's lives. Finally, it is advisable to take the advantage of the increasingly internet-linked world, and try to take the initiative to reach out to the outside world.

"Where there is a will, there is a way." Though this sounds like a cliché, yet learning to articulate stories of their future outposts may lead to a win-win situation. As specialists, or general practitioners, they may not be able to solve all the problems. Yet at least they can tell their stories via podcast (or other social media) so that the outsiders can hear the true stories and apply different ways to help. In other words, they shouldn't _____ themselves to the comfort zone, or take the city living standard for granted. If they change their mindset, they would really feel rewarded by the help they render to others, and benefit their own body, soul, and spirit.

44. Which of the following statements support the importance of increasing the number of physicians in Taiwan, according to the passage?
- (A) The internet world is an advantage to physicians.
 - (B) A fixed physician number is no longer fashionable.
 - (C) Severe health situations may arise in the future.
 - (D) Physicians should adapt to the dynamic world.
 - (E) Specialists are unable to solve all the problems.
45. Where does the following sentence best belong?
- Their issues are too broad to be the focus of this passage.
- (A) At the end of paragraph 1.
 - (B) At the end of paragraph 2.
 - (C) At the end of paragraph 3.
 - (D) At the end of paragraph 4.
 - (E) At the end of paragraph 5.
46. What can be inferred from paragraph 2?
- (A) Medicare varies largely between the elderly and the sickly.
 - (B) Preventive care may reduce overall health care spending.
 - (C) We should allow medical supplies for bed-bound patients.
 - (D) Insurance should cover expenses related to organ donation.
 - (E) Donors see the topic of organ donation as a cultural conflict.

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47. Which of the following is discussed in paragraph 3 as a main factor in our contemporary society?
(A) Social immunity and its relation to higher level of disease.
(B) Social anxiety and its relation to chronic mental disorders.
(C) Social economy and its relation to people's social behaviors.
(D) Social inequality and its relation to various types of illness.
(E) Social mobility and its relation to a person's social status.
48. The word "cliché" in the last paragraph is closest in meaning to _____.
(A) cowardice (B) counterpart (C) crackdown (D) commonplace (E) corruption
49. Which of the sentences below best expresses the essential information given to postgraduate medical students in the highlighted sentence in paragraph 4?
(A) They should show affection for the world.
(B) They should prepare to cope with disaster.
(C) They should offer to strengthen the world.
(D) They should start supporting the system.
(E) They should expose themselves to danger.
50. Which of the following set of problems does the word "psychosomatic" in paragraph 3 refer to?
(A) glands and hormones
(B) nerves and fibers
(C) behavior and genes
(D) mind and body
(E) blood and urine
51. All the following are suggestions to potential postgraduate medical students if they face the challenges EXCEPT:
(A) Stick to the goals set originally.
(B) Stay resilient in times of uncertainty.
(C) Make good use of online resources.
(D) Go beyond an enclosed situation.
(E) Measure twice and cut once.
52. What is the purpose of the conclusion sentence?
(A) Reiterate the statement.
(B) Return to the scenario.
(C) Provide some insight.
(D) Paraphrase suggestions.
(E) Assess the status quo.
53. The most appropriate answer to the blank in the final paragraph is _____.
(A) border (B) limit (C) verge (D) filter (E) refine

Passage C

Born in 1870, Dr. David Landsborough III (蘭大衛), the founder of Changhua Christian Hospital which was founded in 1896 as one of the first teaching hospitals in Formosa, was a British missionary and physician, also a pioneer to Taiwan. Growing up in Scotland in a religious family, he took a boat journey of three months from there to Taiwan, and spent even more months in learning the local language. Going back to England for the last time in 1936, he left a great legacy of love. His son, David Landsborough IV, continued his missionary work for decades afterwards.

Dr. Lan, as Taiwanese nicknamed him, was a role model to everyone who would like to be extremely altruistic to anyone in need. The most famous feat was that he was willing to cut partial skin of his wife (née Marjorie Learner 連瑪玉), another missionary to Taiwan, under her suggestion, to graft

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onto an adolescent patient Chou Chin-Yao to prevent his skin ulcers around his knee from deterioration and eventual amputation. Though this unprecedented operation did not succeed due to Chou's rejection mechanism, he still survived, required no amputation, and became a missionary too.

This is not just a touching story to the local Changhua community. David Landsborough III continued to practice allograft, or allotransplantation, a kind of surgery to graft tissues from a donor to a recipient of the same species but not genetically identical. (Though references are now unavailable.) Yet in 1958, another Taiwanese medical pioneer, Dr. Tsung-Ming Tu (杜聰明), the founder of Kaohsiung Medical School, invited David Landsborough III's widow right after his death in the previous year, to speak the aforementioned story in front of students at Kaohsiung Medical School. The story was painted down by a famous Taiwanese artist Lee Shih-Chiao (李石樵) as an oil painting and preserved at Kaohsiung Medical School as a professional model to follow, even to this day.

In today's society, if physician-patient relationships can imitate a bit from this model, we might end up with a better society.

54. According to the passage, which of the following statements is true about David Landsborough III?
- (A) He spent months learning Taiwanese in Changhua.
 - (B) He inaugurated Changhua Christian Hospital.
 - (C) He returned to his homeland in his later years.
 - (D) He was ridiculed due to his allograft failure.
 - (E) He left the religious group for the medicine field.
55. The word "altruistic" in paragraph 2 is closest in meaning to:
- (A) unanimous (B) charitable (C) extravagant (D) versatile (E) dependable
56. According to the passage, which of the following statements is true about Marjorie Learner?
- (A) She met her husband after arriving in Taiwan.
 - (B) She regretted about her skin-cutting decision.
 - (C) She encouraged her husband to practice allograft.
 - (D) She assisted her husband in allograft operation.
 - (E) She imparted the allotransplantation story to Dr. Tu's students.
57. According to this passage, what happened to Chou Chin-Yao?
- (A) He developed serious skin cancer around his knee.
 - (B) He recovered from his condition with no references.
 - (C) He survived the skin graft and became a missionary.
 - (D) He rejected the operation suggested by the doctor.
 - (E) He still needed an amputation due to skin ulcers.
58. Which of the following best describes what the passage is about?
- (A) Medical missions to nineteenth-century Taiwan.
 - (B) The love surrounding Taiwan's first skin graft.
 - (C) David Landsborough III's inspiration to Dr. Tu.
 - (D) Marjorie Learner's faith in her beloved husband.
 - (E) A good model of doctor-patient-painter relations.

IV. Essay Writing (20 points): It is generally known that the job of a physician is highly stressful. If you are admitted to a medical college, what do you propose to do to prepare yourself for the extraordinary pressures and challenges that lie ahead? Write a well-organized essay of at least 200 words to elaborate on your ideas.

國立中興大學111學年度
醫學院學士後醫學系招生考試選擇題參考答案

科目：英文

題號	答案	題號	答案	題號	答案	題號	答案	題號	答案
1.	D	2.	C	3.	E	4.	E	5.	A
6.	B	7.	C	8.	B	9.	B	10.	C
11.	C	12.	A	13.	E	14.	C	15.	A
16.	D	17.	A	18.	E	19.	C	20.	A
21.	A	22.	C	23.	A	24.	B	25.	A
26.	D	27.	C	28.	C	29.	D	30.	A
31.	C	32.	D	33.	D	34.	A	35.	C
36.	D	37.	C	38.	E	39.	E	40.	E
41.	C	42.	B	43.	E	44.	C	45.	C
46.	B	47.	D	48.	D	49.	B	50.	D
51.	E	52.	C	53.	B	54.	B	55.	B
56.	E	57.	C	58.	B	59.		60.	

科目：物理

題號	答案	題號	答案	題號	答案	題號	答案	題號	答案
1.	E	2.	B	3.	B	4.	B	5.	E
6.	B	7.	D	8.	C	9.	B	10.	D
11.	D	12.	C	13.	B	14.	B	15.	C
16.	B	17.	D	18.	C	19.	D	20.	B
21.	B	22.	C	23.	D	24.	E	25.	A
26.	C	27.	D	28.	A	29.	D	30.	B
31.	A	32.	D	33.	A	34.	A	35.	C
36.	A	37.	C	38.	A	39.	C	40.	D
41.	B	42.	D	43.	B	44.	C	45.	A
46.	D	47.	A	48.	D	49.	D	50.	A

科目：化學

題號	答案	題號	答案	題號	答案	題號	答案	題號	答案
1.	B	2.	B	3.	A	4.	A	5.	D
6.	E	7.	D	8.	A	9.	A	10.	B
11.	B	12.	C	13.	A	14.	D	15.	A
16.	B	17.	D	18.	D	19.	C	20.	A
21.	C	22.	B	23.	D	24.	E	25.	E
26.	B	27.	D	28.	B	29.	C	30.	A
31.	C	32.	D	33.	C	34.	C	35.	A
36.	C	37.	B	38.	C	39.	B	40.	D
41.	C	42.	D	43.	A	44.	B	45.	C
46.	D	47.	A	48.	B	49.	B	50.	B

科目：普通生物及生化概論

題號	答案	題號	答案	題號	答案	題號	答案	題號	答案
1.	A	2.	B	3.	A	4.	E	5.	D
6.	C	7.	E	8.	D	9.	E	10.	C
11.	A	12.	B	13.	E	14.	C	15.	B
16.	C	17.	D	18.	E	19.	C	20.	A
21.	C	22.	E	23.	D	24.	B	25.	B
26.	A	27.	B	28.	D	29.	D	30.	A
31.	C	32.	B	33.	C	34.	B	35.	E
36.	D	37.	A	38.	D	39.	A	40.	A
41.	B	42.	E	43.	E	44.	C	45.	D
46.	D	47.	A	48.	C	49.	D	50.	B
51.	B	52.	C	53.	A	54.	B	55.	C
56.	C	57.	D	58.	D	59.	C	60.	D
61.	B	62.	D	63.	A	64.	A	65.	A
66.	C	67.	B	68.	C	69.	C	70.	C

國立中興大學 111 學年度學士後醫學系招生考試試題參考答案疑義釋疑公告

科目	題號	疑義答覆	釋疑結果
英文	15	1. 本題題幹第一句提到「科學家已指出飢餓不僅僅是某種狀況」(“Scientists have shown that hunger isn’t just something _____.”)。句中「飢餓不僅僅是…」一語透露下一句關於飢餓狀況的訊息，將與第一句相對。針對飢餓狀況，題幹第二句進一步指出「童年時期經歷之飢餓狀況具有漣漪效應，我們也才正開始理解。」(“Hunger during childhood can have a ripple effect that we are only just beginning to understand.”)，句中「漣漪效應」正是與第一句意思相對的主要關鍵訊息。「漣漪效應」(a ripple effect)意指“a spreading, pervasive, and usually unintentional effect or influence”，亦即童年時期經歷之飢餓狀況會延伸、擴大。透過第二句回頭理解第一句，顯示飢餓狀況不僅僅是短暫的、一時的。 2. 本題為單選選擇題，作答者需按題幹文意，從選項中挑出最適切者，(A) transient 為其中最適切選項。 本題及公布之答案均無誤，維持原公布之答案。	維持原答案 (A)
	49	本題為考卷印製問題，無法判斷此題答案，本題送分。	本題送分
	56	根據閱讀測驗 Passage C 第二段敘述：The most famous feat was that he was willing to cut partial skin of his wife (née Marjorie Learner 連瑪玉), another missionary to Taiwan, under her suggestion, to graft onto an adolescent patient Chou Chin-Yao to prevent his skin ulcers around his knee from deterioration and eventual amputation.文中 under her suggestion 文意乃連接 he was willing to cut partial skin of his wife 而來，即 he was willing to cut partial skin of his wife under her suggestion；意指蘭醫師為進行該次手術，割下其妻連瑪玉皮膚，乃經連瑪玉建議，但此建議僅針對該手術。文章他處並未提及連瑪玉鼓勵蘭醫師從事異體移植手術。 本題及公布之答案均無誤，維持原公布之答案。	維持原答案 (E)

科目	題號	疑義答覆	釋疑結果
物理	16	本題因題目數字誤植，故沒有答案，本題送分。	本題送分
	21	本題雖可以理解題意來計算，但為顧及考試公平性，本題送分。	本題送分
	30	本題為正確答案誤植，答案更正為(D)。	答案更正為(D)
	35	本題因正確答案不在選項中，本題送分。	本題送分

科目	題號	疑義答覆	釋疑結果
化學	5	確實在題意上及圖形上可能造成誤解，雖然在假設一定情況下，正確答案應為(D)。不過此題答(D)或(E)可給分。	答案更改為(D)或(E)
	4	此題目主要是判斷何者化合物可以溶於水(soluble)， PbCl_2 在加熱狀態下雖然可部分溶於水，但在加熱狀態下許多化合物皆可部分溶於水，所以此題維持答案(A) CaS 可完全溶於水	維持原答案(A)
	6	此題因為(B)選項打字錯誤，可能造成無法判斷，因此此題送分。	本題送分
	10	由於考生是根據實際熔點去做答案判斷，但此題目是詢問若根據離子鍵理論(離子之間作用力越強則有較高熔點及沸點)何者應有較高熔點？則 MgF_2 應為正確答案，因此決定此題目答案可以為(B)或(D)。	答案更改為(B)或(D)
	15	若是從沸點思考確實答案應為(E)，不過若是從分子間作用力思考， NH_3 還是有氫鍵作用力，在某個溫度下可能蒸氣壓會比 BCl_3 高，因此決定此題目答案可以為(A)或(E)。	答案更改為(A)或(E)
	23	氫標準電極確實是在定義上為零，故本題答案(C)也算對，因此答案更改為(C)或(D)	答案更改為(C)或(D)
	28	因最右下第8個化合物答案上可能有所爭議，故決定答案(A)(4個)或(B)(5個)皆給對。	答案更改為(A)或(B)
	37	因第5個步驟之反應得到的產物可能為(A)或(B)，但因爭議較大，經討論過後此題送分。	本題送分

科目	題號	疑義答覆	釋疑結果
普通生物及生化概論	8	因為 glyceraldehyde-3-phosphate/ dihydroxyacetone phosphate 可藉 isomerase 轉換所以選項(A)亦可。	答案更改為 (A)或(D)
	10	此題依據期刊論文提出 Vitiman B6 亦有抗氧化之功能，惟該期刊結果乃依據老鼠之動物實驗結果所下之結論，因此 Vitiman B6 於抗氧化之功能仍有待最後確認，基於此一疑義，因此本題送分。	本題送分
	13	本題為正確答案誤植，答案更正為(B)。	答案更正為 (B)
	18	此題釋疑點在於”change of a single base in the non-coding region of a gene “是否符合 silent mutation 的定義。但實際上還是必須確保產生的蛋白質沒有產生改變，例如 splicing site 的 mutation 是有可能發生 exon skipping 和氨基酸序列缺失。	維持原答案 (E)
	22	此題依據 Principles of Biochemistry Leininger 8 edition 內容，認為 Crispr/Cas9 利用 single strand break (SSB)引起 Homologous recombination (HR)來進行基因編輯。該課本的圖以及文字描述省略了細節部分，實際上利用修改過 Cas9 蛋白(Cas9 Nickase) 能夠產生 single strand break，但必須利用 2 個在不同鏈且距離不能太遠的 SSB 來引起 Double strand break (DSB)。SSB 一般是無法引發 HR 的。因此，即使是利用 Cas9 nickase 依然是透過 DSB 所引起 NHEJ 或是 HR 來進行基因組編輯。	維持原答案 (E)
	27	此題釋疑點在於 lactose 不會直接與 lac repressor 結合，必須先轉換為 allolactose，是否能夠認為是 allosteric regulator。本題出題老師採用對 regulator 的廣義解釋：lactose 具有對 lac repressor 進行 allosteric regulation 能力，亦可視為 regulator。採用狹義解釋 regulator 專指結合在蛋白上的分子，在本題中不會產生答案，且針對該分子的名稱並不統一(modulator, effector, regulator)，因此維持原答案	維持原答案 (B)
	28	此題釋疑點在於 RNA interference 是不是 epigenetic regulation Epigenetic regulation 是指 DNA 序列不變的情況下調控基因表現，但基因表現指的是從 DNA 到 RNA 過程。RNA interference 則是利用影響 RNA 來調控蛋白質或是 RNA 其他 RNA 功能。容易產生誤解的地方在於有一小部分 non-coding	維持原答案 (D)

		RNA 被認為具有調控基因表現的能力，但一般不會認為是 RNA interference。	
	30	本題為正確答案誤植，答案更正為(D)。	答案更正為(D)
	39	本題為正確答案誤植，答案更正為(E)。	答案更正為(E)
	40	步驟 V 為 translocation step to start a new fatty acid synthesis cycle. 因此(A)是本題適合的答案。	維持原答案(A)
	42	在 urea cycle 中並無 Gln 直接參與。	維持原答案(E)
	65	$\psi_p + \psi_s = -0.3 \text{ MPa}$ $-0.5 \text{ MPa} (\psi_s) + (\psi_p) = -0.3 \text{ MPa}$ $\psi_p = +0.2 \text{ MPa}$ 調整答案為(B)	答案更正為(B)
	66	減少中間宿主 Freshwater snail 的數量，可有效降低 blood flukes 的感染率 調整答案為(B)	答案更正為(B)