2023 － 3

医学部医学科英語入試問題

下記の注意事項をよく読んで解答してください。

◎注意事項

1. 配付された問題冊子および解答用マークシートに，それぞれ受験番号(4桁)ならびに氏名を記入し，解答用マークシートの受験番号欄に自分の番号を正しくマークしてください。
2. マークには必ずＨＢの鉛筆を使用し，濃く正しくマークしてください。
   記入マーク例：良い例 ●
   悪い例 ∅ ⓘ ∅ ⊙
3. マークを訂正する場合は，消しゴムで完全に消してください。
4. 解答用マークシートの所定の記入欄以外には何も記入しないでください。
5. 解答用マークシートを折り曲げたり，汚したりしないでください。
6. 「止め」の合図があったら，問題冊子の上に解答用マークシートを重ねて置いてください。

(受験番号のマークの仕方)

受	験	番	号
千	百	十	一
0	0	1	2

受	験	番	号
千	百	十	一
●	●	⓪	⓪
①	①	●	①
②	②	②	●
③	③	③	③
④	④	④	④
⑤	⑤	⑤	⑤
⑥	⑥	⑥	⑥
⑦	⑦	⑦	⑦
⑧	⑧	⑧	⑧
⑨	⑨	⑨	⑨

受験番号 [　　]　氏　名 [　　]

解答

1 次の英文を読み，設問1．～15. に最も適した答えを a. ～d. の中から一つ選べ。

1 Reading is the most important skill that a child must acquire at school, because one must learn to read to be able to read to learn. The implication of this is that the child who is a poor reader will usually also be a poor learner. Unfortunately poor reading skills, and therefore poor learning skills, have become a reality for an alarming number of people. The $14 million National Adult Literacy Survey of 1993 found that even though most adults in this survey had finished high school, 96% of them could not read, write, and figure well enough to go to college. Even more to the point, 25% were plainly unable to read.

2 Even more alarming is that reading difficulties are not limited to people who are environmentally, culturally or economically disadvantaged. Many children come from good homes, go to good schools and score average to above average on IQ tests. Yet, they battle to learn to read, and many never succeed. Children with reading difficulties share a number of common symptoms. They are inclined to reverse letters or words, to omit letters, to lose their place, to remember little of what they have read, or to read with poor comprehension. These children are considered to suffer from a learning disability (LD), commonly called dyslexia.

3 The idea that dyslexia is a certifiable biological disorder, a physical problem that could be diagnosed and treated accordingly, gained credence during the 1960s and 1970s, giving rise to an armada of (4) theories. One such a theory states that dyslexia is the result when the link between the language, hearing and comprehension centers of the brain is somehow misconfigured during fetal development.

4 Another theory states that dyslexia is caused by "faulty wiring in the brain," whereas another holds that a subtle impairment of vision may be responsible, while yet another believes that a cerebellar-vestibular dysfunction may be responsible for the learning disability. All these theories — most of them blaming some difference in structure between the brain of the dyslexic and that of the so-called normal reader — have lead to nothing at all. Despite all these theories and all the intervention efforts based on them, not to mention the vast amounts of money expended in the process, the numbers of dyslexics continue to escalate.

5 [a] Except for the fact that proof of a neurological deficit still eludes (8) the researchers, this theory leaves many questions unanswered. [b] Compare the present situation with, for example, that of a century ago. In 1910 the literacy rate in the U.S.A. was so high it was predicted, "the public schools will in a short time practically eliminate illiteracy." [c] In 1935, a survey of the 375,000 men working in the Civilian Conservation Corps — a government-sponsored work project to provide employment — found an illiteracy rate of 1.9%. [d] It is most noteworthy that this last figure was found among men primarily of low socio-economic status. It is even more noteworthy that the illiteracy rates of the first half of the twentieth century reflected, for the most part, people who had never had the advantage of schooling.

6 It is also impossible to explain how a neurological dysfunction can be more prevalent (11) in specific areas or countries. While the National Commission on Excellence in 1983 warned that the American nation was "at risk," remedial reading facilities were not needed at all in Japan due to the rarity of reading problems. Some would argue that reading problems were virtually nonexistent in Japan because their written language is easier than our Latin alphabet. That, however, is simply not true. The Japanese Kanji ideograms consist of 1,850 characters. In addition there are two Kana syllabaries, which — like our Latin alphabet — use symbols to represent sounds. Each Kana syllabary has 46 basic letters compared to our 26.

7 It is also important to note that differences in brain structures do not necessarily equal brain disorders. Differences between dyslexics' brains and those of normal readers are not necessarily the *cause* of a reading difficulty. Such differences can well be the *effect* of a learning difficulty. Latest neurological findings — for example through the work of Michael Merzenich of the University of San Francisco — show that, while certain areas of the brain are designated for specific purposes, brain cells and cortical maps do change in response to learning. An interesting study in London has found that an area of the brain associated with navigation was larger in London's famed taxi drivers than in other people. The drivers' brains have adapted to help them store a detailed mental map of the city, shrinking in one area to allow growth in another.

8 The tendency over the past nearly a century has been to try and fit the dyslexia shoe on the foot of the children who fail to learn to read. All efforts to make this shoe fit have failed. If a shoe does not fit one foot, shouldn't we try it on the other foot?

(出典：Dyslexia: Is the Shoe Perhaps on the Wrong Foot? by Susan du Plessis, https://www.streetdirectory.com/travel_guide/7455/parenting/dyslexia_is_the_shoe_perhaps_on_the_wrong_foot.html)

1. According to the author, reading is the most important skill for a child because _____.
   a. reading is a skill that takes a long time to acquire
   b. the ability to read is a prerequisite for effective learning
   c. an alarming number of children suffer from poor reading skills
   d. students cannot be effective readers unless they are effective learners

2. According to paragraph 1, which of the following is true?
   a. The 1993 Survey revealed an increase in illiteracy rate among children.
   b. Ninety-six percent of the people in the 1993 survey could afford to go to college.
   c. Thirty years ago, students could attend college even if they could not read well.
   d. A quarter of the subjects in National Adult Literacy Survey of 1993 were illiterate.

3. According to paragraph 2, which is NOT a common symptom of dyslexic children?
   a. They forget where they were reading.
   b. They cannot remember particular letters.
   c. They do not understand the material correctly.
   d. They have trouble remembering what they read.

4. The underlined phrase "an armada of" in paragraph 3 is closest in meaning to _____.
   a. militant
   b. reinforced
   c. numerous
   d. unconventional

5. According to paragraph 3, what did medical researchers in the 1960s and 1970s think of dyslexia?
   a. It was basically a mental problem.
   b. It was not a biological misfunction.
   c. It was extremely difficult to diagnose.
   d. It was theoretically a curable disorder.

6. According to one theory of dyslexia, _____.

a. the problem responsible for dyslexia occurs before birth

b. a serious case of dyslexia could lead to an impairment of vision

c. the brain of a dyslexic child is no different from that of a normal reader

d. comprehension centers in the brain do not fully develop in dyslexic children

7. According to paragraph 4, which of the following is NOT true?

a. One theory of dyslexia relates the phenomenon to a problem in the brain.

b. The number of children who have a reading difficulty has been increasing.

c. None of the theories about dyslexia managed to help children learn to read.

d. Research into learning disabilities has not been fully funded up until recently.

8. The underlined word "eludes" in paragraph 5 is closest in meaning to _____.

a. is welcomed by

b. gives inspiration to

c. is incomprehensible to

d. has greatly disappointed

9. Where would the following sentence best fit in paragraph 5? Choose [a], [b], [c] or [d].

If dyslexia has a neurological basis, why is this supposedly non-contagious "ailment" on the increase?

10. According to paragraph 5, what was noteworthy about the results of a 1935 survey?

a. As many as 375,000 men took part in the survey.

b. Almost all the people surveyed had the advantage of schooling.

c. Only 1.9% of those surveyed were of high socio-economic status.

d. Illiteracy in the 1930s could be attributed to a lack of school education.

11. The underlined word "prevalent" in paragraph 6 is closest in meaning to _____.

a. easily treated

b. commonly found

c. culturally acceptable

d. limited in age groups

12. In paragraph 6, what is Japan mentioned as an example of?

a. A nation with few reading problems.

b. A nation whose language is difficult to learn.

c. A nation with adequate remedial reading facilities.

d. A nation in which people study 1,850 kanji characters.

13. According to Michael Merzenich, _____.

a. the brain needs to shrink first to let it grow as a whole

b. human brains are flexible enough to serve multiple purposes

c. brain cells associated with navigation have yet to be determined

d. certain brain parts have fixed purposes whereas other parts do not

14. According to paragraph 7, which of the following is true?

a. A difference was found between an area in the brain of taxi drivers and the same area in other people.

b. Differences in the brain structure were determined to be a major cause of most dyslexia cases.

c. Latest neurological findings show that a learning difficulty can be effectively treated.

d. London's famed taxi drivers developed an accurate map of the city all by themselves.

15. According to the passage, which of the following is true?

a. Children with reading difficulties mostly come from not-well-off families.

b. A majority of children with a learning disability score below average on IQ tests.

c. The illiteracy rate in the U.S.A. in the 1930s was much lower than that in the 1990s.

d. A 1993 survey found that 96% of adults who didn't finish high school were virtually illiterate.

2　次の英文を読み，1～10の下線部に入る最も適した語(句)をa．～d．の中から一つ選べ。

著作権の関係により表示しません

著作権の関係により表示しません

著作権の関係により表示しません

3 次の英文を読み，設問1．～15．に最も適した答えをa．～d．の中から一つ選べ。

1 Most of us don't have any memories from the first three to four years of our lives. In fact, we tend to remember very little of life before the age of seven. And when we do try to think back to our earliest memories, it is often unclear whether they are the real thing or just recollections based on photos or stories told to us by others. The phenomenon, known as "childhood amnesia," has been puzzling psychologists for more than a century — and we still don't fully understand it. But research is starting to suggest an answer: Autobiographical memory might begin with the stories we tell each other.

2 At first glance, it may seem that the reason we don't remember being babies is because infants and toddlers don't have a fully developed memory. But babies as young as six months can form both short-term memories that last for minutes, and long-term memories that last weeks, if not months. In one study, six-month-olds who learned how to press a lever to operate a toy train remembered how to perform this action for two to three weeks after they had last seen the toy. Preschoolers, on the other hand, can remember events that go years back. It's debatable whether long-term memories at this early age are truly autobiographical, though — that is, personally relevant events that occurred in a specific time and place.

3 Of course, memory capabilities at these ages are not adult-like — they continue to mature (3) until adolescence. In fact, developmental changes in basic memory processes have been put forward as an explanation for childhood amnesia, and it's one of the best theories we've got so far. These basic processes involve several brain regions and include forming, maintaining, and then later retrieving the memory. For example, the hippocampus, thought to be responsible for forming memories, continues developing until at least the age of seven. We know that the typical boundary for the offset of childhood amnesia — three and a half years — shifts with age. Children and teenagers have earlier memories than adults do. This suggests that the problem may be less with forming memories than with maintaining them.

4 However, this does not seem to be the whole story. Language also plays a role. From the ages of one to six, children progress from the one-word stage of speaking to becoming fluent in their native language(s), so there are major changes in their verbal ability that overlap with the childhood amnesia period. This includes using the past tense, memory-related words such as "remember" and "forget," and personal pronouns, a favorite being "mine."

5 It is true to some extent that a child's ability to verbalize about an event at the time that it happened predicts how well they remember it months or years later. One lab group conducted this work by interviewing toddlers brought to accident and emergency departments for common childhood injuries. Toddlers over 26 months, who could talk about the event at the time, recalled it up to five years later — whereas those under 26 months, who could not talk about it, recalled little or nothing. This suggests that preverbal memories are lost if they are not translated into language.

6 However, most research on the role of language focuses on a particular form of expression called narrative, and its social function. When parents reminisce with very young children about past events, they implicitly (8) teach them narrative skills — what kinds of events are important to remember and how to structure talking about them in a way that others can understand. [a] Unlike simply recounting information for factual purposes, reminiscing revolves around the social function of sharing experiences with others. [b] In this way, family stories maintain the memory's accessibility over time, and also increase the coherence of the narrative, including the chronology of events, their theme, and their degree of emotion. [c] Maori adults have the earliest childhood memories (age 2.5) of any society studied so far, thanks to Maori parents' highly elaborative style of telling family stories. [d]

7 Reminiscing has different social functions in different cultures, which contribute to cultural variations in the quantity, quality, and timing of early autobiographical memories. Adults in cultures that value autonomy (11) (North America, Western Europe) tend to report earlier and more childhood memories than adults in cultures that value relatedness (Asia, Africa).

8 This is predicted by cultural differences in parental reminiscing style. In cultures that promote more autonomous self-concepts, parental reminiscing focuses more on children's individual experiences, preferences, and feelings, and less on their relationships with others, social routines, and behavioral standards. For example, an American child might remember getting a gold star in preschool whereas a Chinese child might remember the class learning a particular song at preschool.

9 While there are still things we don't understand about childhood amnesia, researchers are making progress. For example, there are more prospective longitudinal (13) studies that follow individuals from childhood into the future. This helps give accurate accounts of events, which is better than retrospectively asking teens or adults to remember past events which are not documented. Also, as neuroscience progresses, there will undoubtedly be more studies relating brain development to memory development. This should help us develop other measures of memory besides verbal reports.

10 In the meantime, it's important to remember that, even if we can't explicitly remember specific events from when we were very young, their accumulation (14) nevertheless leaves lasting traces that influence our behavior. The first few years of life are paradoxically forgettable and yet powerful in shaping the adults that we become.

(出典：Why can't we remember our early childhood? byJeanne Shinskey, The Conversation, https://theconversation.com/why-cant-we-remember-our-early-childhood-62325)

1. According to paragraph 1, _____.

a. vivid memories of our childhood normally begin at three to four years old

b. childhood amnesia has been a subject of scientific study for the past few centuries

c. psychologists have discovered that autobiographical memory can be surprisingly accurate

d. we are often uncertain whether or not our early childhood memories are actual experiences

2. According to paragraph 2, _____.

a. six-month-old babies are able to remember what they did a few weeks ago

b. a young child's long-term memories are limited to personally relevant events

c. most preschoolers have difficulty recalling events that took place only a month ago

d. it is difficult to recall memories in infancy because infants' memory is not developed yet

3. The underlined word "mature" in paragraph 3 is closest in meaning to _____.

a. complicate

b. develop

c. preoccupy

d. revitalize

4. According to paragraph 3, _____.

a. the hippocampus plays an important role in memory formation

b. it is normally harder to form correct memories than to properly maintain them

c. a particular brain region in which basic memory processes occur has recently been identified

d. childhood amnesia cannot be explained in terms of developmental changes in basic memory processes

5. According to paragraph 4, which of the following is true?

a. Children start using the word "forget" before learning to use "remember."

b. The use of past tense typically begins during the childhood amnesia period.

c. Non-verbal nature of infant memory is conspicuous during the ages of one to six.

d. Personal pronouns are one of the difficult categories of language use for children.

6. According to paragraph 5, _____.

a. children under two years of age recall events graphically as well as verbally

b. a child's linguistic ability can be seriously damaged by common childhood injuries

c. seven-year-old children could describe what happened to them when they were three

d. most toddlers brought to accident and emergency departments suffered from speech disorder

7. According to paragraph 5, one reason why childhood amnesia occurs is that _____.

a. preverbal memories are lost when a baby reaches 26 months old

b. it is difficult for young children to translate one language into another

c. most of what very young children experience is hardly ever verbalized

d. most children start using fully developed language at around 26 months

8. The underlined word "implicitly" in paragraph 6 is closest in meaning to _____.

a. immaturely

b. indirectly

c. inherently

d. invariably

9. Where would the following sentence best fit in paragraph 6? Choose [a], [b], [c] or [d].

More coherent stories are remembered better.

10. According to paragraph 6, which of the following is true?

a. Maori adults consider it important to give detailed accounts of family stories.

b. The role which narrative plays in childhood memory has been underestimated.

c. Most reminiscing involves simple recounting of information for factual purposes.

d. Parents who try to teach their children narrative skills have better memories than those who don't.

11. The underlined word "autonomy" in paragraph 7 is closest in meaning to _____.

a. altitude

b. education

c. disobedience

d. independence

12. According to paragraph 8, American parents are likely to talk to their children about _____.

a. promoting autonomous community

b. what they achieved as a young child

c. social routines and behavioral standards

d. the significance of getting a gold star in preschool

13. The underlined word "longitudinal" in paragraph 9 is closest in meaning to _____.

a. conducted over an extended period

b. done by using an organized procedure

c. referring to the natural features of a place

d. relating to the study of how disease spreads

14. In paragraph 10, the underlined phrase "their accumulation" refers to the accumulation of _____.

a. gradually acquired long-term memories

b. a number of traumatic childhood memories

c. numerous things that young children experience

d. attempts to recollect what happened to them before

15. One problem with how childhood amnesia has been studied so far is that _____.

a. it is getting harder to follow individuals from childhood into the future

b. remembering events from our childhood tends to influence our future behavior

c. it is difficult to conduct research relating brain development to memory development

d. researchers were often unable to attest the accuracy of a subject's childhood memories

4 次の1.～10. は The World before First Contact と題する一つづきの文章の冒頭である。1.～10. の各英文それぞれについて，下線部分に誤りを含んでいるものを記号(a)～(d)の中から一つ選べ。誤りがない場合は(e)を選べ。

1. Most animal species occupy (a) a geographic range that (b) is limit (c) to a small fraction (d) of the earth's surface. No Error (e)

2. When animals do occur (a) on several continents, individuals from the (b) different continents do (c) not encounter into (d) each other. No Error (e)

3. Instead, each continent, which (a) usually each small part (b) of a continent, has (c) its own distinctive (d) population. No Error (e)

4. That population that has (a) contact with its close (b) neighbors but not with distant members (c) of the (d) same species. No Error (e)

5. The fact that populations have (a) limited geographic ranges (b) is reflected in (c) geographic variations within species. (d) No Error (e)

6. Populations of the same species in (a) different geographic areas tend to evolve into (b) different-looking subspecies, because (c) most breeding remaining (d) within the same population. No Error (e)

7. For example, there are (a) two subspecies of lowland gorillas in Africa: eastern and western. No East African lowland gorilla has ever (b) turned up in West Africa, and no (c) West African lowland gorilla has been seen in (d) East Africa. No Error (e)

8. Although they belong to (a) the same species, the two subspecies look different enough from (b) biologists to (c) be able to identify them on (d) sight. No Error (e)

9. Humans have been typical animals throughout most of our evolutionally (a) history, meaning (b) that populations of people have tended (c) to remain inside (d) distinct geographical areas. No Error (e)

10. Each human population became genetically molded (a) to its area's climate (b) and diseases. In addition, differences in (c) language and culture kept humans by (d) freely mixing. No Error (e)

(出典：Jared Diamond, excerpt from The Third Chimpanzee For Young People: On the Evolution and Future of the Human Animal,adapted by Rebecca Stefoff, pp. 222-223. Copyright (c) 2014 by Jared Diamond. Reprinted with the permission of The Permissions Company, LLC on behalf of Seven Stories Press, www.sevenstories.com.)

5 次の英文を読み，設問1．～15．に最も適した答えをa．～d．の中から一つ選べ。

1 Around the end of the 1930s, the Irish Prime Minister Eamon de Valera was toying with the idea of establishing a leading institute of physics in Dublin. His idea was based on the Institute for Advanced Studies in Princeton, where Albert Einstein found refuge after fleeing Nazi Germany. The Dublin Institute for Advanced Studies was soon established but, to complete the picture, (1) it needed to attract one of the world's top names in physics.

2 A unique opportunity soon presented itself when De Valera heard that Erwin Schrödinger was under heavy pressure in his homeland. His declared opposition to Nazism had made his work at the University of Graz, where the rector was a Nazi, almost impossible. After the annexation of Austria into Germany in 1938, Schrödinger was forced to leave Austria and seek refuge elsewhere. At that moment, because of his pioneering work in quantum mechanics, he could justifiably be called a leading figure in physics.

3 Consequently, in 1939, the Nobel Prizewinner arrived in Ireland, where he spent 16 years trying to explain all the fundamental forces of nature in a single unified field theory. Although he failed in this ambition, he did succeed in making Dublin an internationally renowned center of theoretical physics. In that period, Schrödinger himself produced around 50 scientific publications.

4 In 1943, Schrödinger gave the annual Trinity College public lecture. He deliberately avoided the more obvious topics of wave mechanics and electromagnetic fields and chose something completely different: "a naïve physicists' approach to the phenomenon of life." Schrödinger had earlier been alerted to the paper *On the nature of gene mutation and gene structure* by Timoféeff-Ressovsky, Zimmer, and Delbrück, which suggested for the first time that gene mutation is caused by a change in a single location in a molecule. Schrödinger saw in the discontinuous way in which mutations occur, a strong similarity with quantum mechanics. It inspired him to devote a series of three public lectures to his ideas on how heredity is determined by chemical and physical mechanisms.

5 These popular scientific lectures formed the basis of the book *What Is Life?*, published in 1944 with the subtitle *The Physical Aspect of the Living Cell*. Totally against all expectations, the book sold like hot cakes, with more than 100,000 copies going over the counter in a short time.

6 Schrödinger starts the book by asking how the events that occur in a living organism in space and time can be explained by physics and chemistry. He says that, although these disciplines did not, at that time, offer satisfactory explanations, that by no means suggests that they cannot be used to explain life processes. In his view, the road to understanding life starts with the awareness that it is based on purely mechanical actions. That implies that a biological system can be completely described and analyzed by mathematical equations.

7 Schrödinger writes that, in some way or another, chromosomes contain the complete code for the development of an individual and that the phenotype, the "manifest (8) nature of the individual," can be completely predicted from the code-script. Particularly striking is the claim that the gene is a kind of aperiodic crystal, or a chain of various recurring units. He compares the different units with the dots and dashes of Morse code.

8 Despite its high sales, the book did not escape criticism from scientific quarters. Schrödinger thought that the gene was a protein in which each atom played an individual role. Because he was not a biologist himself, he had to rely on the work of others, and drew particularly heavily on earlier work by the three-man ship Timoféeff-Ressovsky, Zimmer, and Delbrück. [a] In fact, his description of the gene is simply a reformulation of Delbrück's suggestion that a gene is a polymer, built up of recurring identical structures. [b] The content was already obsolete when it was published, because Schrödinger had unfortunately spoken to the wrong biologists, who still believed that genes consisted of proteins. [c] Some months previously, Oswald Avery had discovered that genes consist of DNA, but Schrödinger was not yet aware of that. [d] He had also been unaware of other contemporary developments, such as the use of phages in pursuing the structure of DNA. Max Perutz, winner of the Nobel Prize for Chemistry, summed up the criticism by saying: "What was true in the book was not original, and most of what was original, was not true."

9 If the book contained so little that was new, why did it sell so well and is still considered a groundbreaking work? First of all, it is clear and accessible, for both the scientist and the interested lay reader. Second, the timing was perfect. Driven by Max Planck, Albert Einstein, Niels Bohr, Werner Heisenberg, and, not in the last instance, Schrödinger himself, modern physics had really taken off (12) and there was great confidence that it would exert a considerable influence on all scientific disciplines, including biology.

10 On both sides of the Atlantic, reputed scientists were working to develop the atomic bomb or on other war-driven technologies. While the rest of the scientific world was trapped in military research, in Dublin Schrödinger could practice science freely. With *What Is Life?*, he gave researchers around the whole world the meaningful prospect of placing modern physics once again in a favorable spotlight.

11 For many biologists, Schrödinger's name is forever associated with *What Is Life?*. After reading the book, James Watson decided to devote all his energies to unraveling the structure of DNA. Fellow Nobel Prize winners Francis Crick and Maurice Wilkins were also unanimous in their praise for *What Is Life?*. The more recent commendations emphasize that the book may not have offered any readymade answers to the question in the title, but it did suggest a new direction for research, a new way of addressing the essential questions in biology. This places the book at the cradle (15) of molecular biology.

（出典：René Schils, Erwin Schrödinger, Springer, p.139-142, 2012, Springer Nature）

1. The underlined phrase "complete the picture" in paragraph 1 is closest in meaning to _____.
   a. qualify for the bid
   b. achieve the ideal
   c. depict its ambition
   d. secure enough funding

2. In the late 1930s, _____.
   a. the University of Graz escaped the control of Nazi Germany
   b. Eamon de Valera was under heavy pressure in his homeland
   c. Erwin Schrödinger was already a distinguished physicist
   d. Nazi Germany was trying to employ Erwin Schrödinger as a scientist

3. According to paragraph 3, which of the following is NOT true?
   a. Schrödinger was awarded the Nobel Prize while he was in Dublin.
   b. Schrödinger carried out his research in Ireland all through the 1940s.
   c. Dublin won a world-wide reputation as a center for theoretical physics.
   d. Schrödinger couldn't explain the basic forces of nature using a unified field theory.

4. The topic Schrödinger chose for the the annual Trinity College public lecture was _____.
   a. quantum mechanics
   b. microscopic anatomy
   c. electromagnetic fields
   d. molecular biology

5. According to paragraph 4, what did Schrödinger argue in his public lectures?
   a. Heredity was a chemical and physical phenomenon.
   b. Quantum mechanics could explore the mysteries of life.
   c. Mutation in a molecule occurred in a discontinuous way.
   d. Biology had a strong similarity with quantum mechanics.

6. Concerning the book *What Is Life?*, which of the following is true?
   a. It compared living cells to hot cakes.
   b. Its content fell short of all expectations.
   c. No one had expected the book would sell well.
   d. It was written as a textbook for Schrödinger's lectures.

7. According to paragraph 6, how did Schrödinger regard physics and chemistry?
   a. They could describe only purely mechanical matters.
   b. They had already fully explained how heredity occurred.
   c. They allowed people to understand their own self-awareness.
   d. They would be able to explain processes that occur in living organisms.

8. The underlined word "manifest" in paragraph 7 is closest in meaning to _____.
   a. ambiguous
   b. diverse
   c. obvious
   d. pervasive

9. Why did Schrödinger mention Morse code in his book?
   a. To explain biological information could be encoded using simple units.
   b. To demonstrate how difficult it is to decipher the code-script in chromosomes.
   c. To prove that the gene is a kind of crystal that could be translated into Morse code.
   d. To argue that chromosomes closely resembled the dots and dashes in terms of appearance.

10. Where would the following sentence best fit in paragraph 8? Choose [a], [b], [c] or [d].
    But this was not the only criticism of the book.

11. According to paragraph 8, which of the following is true?
    a. DNA had not been discovered before the publication of *What Is Life?*.
    b. Schrödinger gained fame as a biologist for the success of *What Is Life?*.
    c. *What Is Life?* was highly acclaimed by other scientists from the beginning.
    d. Schrödinger was wrongly led to believe that genes were made up of proteins.

12. The underlined phrase "taken off" in paragraph 9 is closest in meaning to _____.
    a. proven the reality of life
    b. suddenly gone somewhere
    c. quickly become very successful
    d. become part of common knowledge

13. According to paragraphs 9 and 10, one significance of *What Is Life?* is that _____.

a. it was full of completely new ideas about life

b. it led to the development of the atomic bomb

c. it was recommended by Max Planck and Albert Einstein

d. it gave researchers all over the world renewed enthusiasm in their field

14. According to paragraph 11, which of the following is true?

a. Schrödinger's book came to be regarded as a new approach to studying life.

b. *What Is Life?* was harshly criticized by James Watson and Francis Crick.

c. It was proved that Schrödinger was entirely mistaken about what life was like.

d. Maurice Wilkins made use of Schrödinger's theory to discover the structure of DNA.

15. The underlined phrase "the cradle" in paragraph 11 is closest in meaning to _____.

a. a hidden danger

b. the starting point

c. the ultimate goal

d. a comfortable accommodation

6 次の日本文の下線部1～5を英訳した場合，それぞれ最も適切な英文をa.～e.より一つ選べ。

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