

令和4年度 東北医科薬科大学 入学試験問題

医学部 一般・外国語

《 注 意 事 項 》

1. 解答用紙左部に氏名、フリガナ、その下部に受験番号を記入し、例にならって○にマークしなさい。

(例) 受験番号10001の場合


| | |
|------|--|
| フリガナ | |
| 氏名 | |

| 受 験 番 号 | | | | |
|---------|---|---|---|---|
| 万 | 千 | 百 | 十 | 一 |
| 1 | 0 | 0 | 0 | 1 |
| | ● | ● | ● | ○ |
| ● | ① | ① | ① | ● |
| ② | ② | ② | ② | ② |
| ③ | ③ | ③ | ③ | ③ |
| ④ | ④ | ④ | ④ | ④ |
| ⑤ | ⑤ | ⑤ | ⑤ | ⑤ |
| ⑥ | ⑥ | ⑥ | ⑥ | ⑥ |
| ⑦ | ⑦ | ⑦ | ⑦ | ⑦ |
| ⑧ | ⑧ | ⑧ | ⑧ | ⑧ |
| ⑨ | ⑨ | ⑨ | ⑨ | ⑨ |

2. この問題冊子は、14ページまであります。
3. 試験中に問題冊子の印刷不鮮明、ページの落丁・乱丁等に気付いた場合は、手を高く挙げて監督者に知らせなさい。
4. 解答方法は次のとおりです。

- (1) 解答は解答用紙の解答欄にマークしなさい。例えば、と表示のある問いに対して③と解答する場合は解答番号1の解答欄の③にマークしなさい。

| 解答番号 | 解 答 欄 | | | | | | | | | |
|------|-------|---|---|---|---|---|---|---|---|----|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 1 | ① | ② | ● | ④ | ⑤ | ⑥ | ⑦ | ⑧ | ⑨ | ⑩ |

- (2) 解答の作成にはH、F、HBの黒鉛筆またはシャープペンシル(黒い芯に限る)を使用し、○の中を塗りつぶしなさい。解答が薄い場合には、解答が読み取れず、採点できない場合があります。
- (3) 答えを修正する場合は、プラスチック製の消しゴムであとが残らないように**完全に消しなさい**。鉛筆のあとが残ったり、のような消し方などした場合は、修正または解答したことにならないので注意しなさい。
- (4) 解答用紙は折り曲げたり、メモやチェック等で汚したりしないよう、特に注意しなさい。

(試験終了後、問題冊子は持ち帰りなさい。)

【 I 】 次の英文を読み、問 1～6 に答えよ。

Certain brain and personality characteristics may help predict whether a sugar pill can provide relief to someone suffering from (1)chronic pain.

In a small study, patients with (A) back pain who responded to a placebo treatment benefited from up to a 33 percent reduction in their pain intensity. These people had (2)distinctive features in their brains and certain personality traits, researchers report online in *Nature Communications*.

About 20 percent of U.S. adults, or about 50 million people, had chronic pain in 2016, according to new data released by the U.S. Centers for Disease Control and Prevention. Chronic pain was defined as feeling pain on most days, if not every day, over the previous six months.

(3)Being able to identify people who respond to a placebo might mean doctors could give these individuals the option of a pain reliever that's cheap, free of side effects and not addictive.

“We need to seriously think about placebo as a treatment option, especially in chronic pain patients,” says neuroscientist and study coauthor Apkarian Vania Apkarian of Northwestern University Feinberg School of Medicine in Chicago.

Despite not having pharmacologically active properties, placebos such as sugar pills can produce a neurobiological effect, like a (B) of a patient's symptoms. Some people are responsive to placebos and some aren't. It's not clear why, although certain genes may be tied this responsiveness.

Apkarian and colleagues imaged the brains of 68 participants and gave them personality tests. The researchers then randomly assigned the participants to groups that either received no treatment, sugar pills or a pain-killing drug. Those given pills were not told if they received a placebo or an active drug. Participants took the treatment for two weeks, stopped for one week and then repeated this cycle.

(4)Of the 43 patients in the placebo group, 24 reported a reduction in the intensity of their pain, averaging about a 20 percent drop. This pain (C) persisted during the six-week period, even when people weren't taking pills. The decrease in pain was as much as 33 percent during treatment

weeks.

By analyzing the brain images, the team found that these patients, compared with people who weren't (5)susceptible to the placebo, had a difference in volume between the right and left sides of the limbic system in the brain, which is involved in (6)instinct and mood. There were also differences in the number of nerve cell connections between the prefrontal cortex and other brain areas. Personality questionnaires revealed that these people had a higher self-awareness and openness than nonresponders.

"It is surprising and encouraging that it may be possible to predict the magnitude of a placebo effect before treatment," says Tor Wager, a neuroscientist at the University of Colorado Boulder, who was not involved in the research. More work is (7)[① features / ② how / ③ needed / ④ predictive / ⑤ see / ⑥ the / ⑦ to] hold up in other populations and for different pain conditions, he says.

問1 空欄(A)には、下線部(1)chronicと意味の近い語が入る。①～⑤の中から最も適当なものを一つ選び、マークせよ。

① acute ② crushing ③ persistent ④ septic ⑤ viral

問2 下線部(2),(5),(6)の意味に最も近いものを①～⑤の中から一つ選び、マークせよ。

(1) 下線部(2)distinctive

① modest ② relative ③ typical ④ obstructive ⑤ impulsive

(2) 下線部(5)susceptible to

① accompanied by ② easily influenced by ③ familiar to

④ occupied with ⑤ superior to

(3) 下線部(6)instinct

① intuition ② obesity ③ inferiority ④ manipulation ⑤ absorption

問3 下線部(3),(4)の意味として最も適当なものを①～④の中から一つ選び、マークせよ。

(1) 下線部(3)

- ① プラセボに反応する人々を均一化することができれば、医師は一人一人の患者に、安価で副作用も毒性もない鎮痛薬の中からその患者が選んだものを投与することができるようになるかもしれない
- ② プラセボに反応する人々を均一化することができるようになった医師は、これらの人々に、安価で副作用も毒性もない鎮痛薬を個人的に投与することができるようになるかもしれない
- ③ プラセボに反応する人々の検査結果に基づき、医師はこれらの人々に、安価で副作用も中毒性もない鎮痛薬を個人的に処方することができるということが可能になるかもしれない
- ④ 誰がプラセボに反応するかを識別できれば、医師はこれらの人々に、安価で副作用も中毒性もない鎮痛薬を服用する選択肢を与えることができるようになるかもしれない

(2) 下線部(4)

- ① プラセボ群の43人の患者と同様に、平均して約20%に相当する非プラセボ群の24人も、痛みの広がりやの軽減を報告した
- ② 43人のプラセボ群患者のうち、24人の患者は、平均して約20%にまで痛みが低下したと報告した
- ③ 43人のプラセボ群患者のうち24人が、平均して約20%という、痛みの強さの低下を報告した
- ④ 43人の患者のうち、プラセボ群である24人の患者は、痛みの広がりやが平均して約20%軽減したことを報告した

問4 空欄(B)、(C)に入るものとして最も適当なものをそれぞれ①～⑤から一つ選び、マークせよ。

(1) 空欄(B)

- ① attracting ② diagnosing ③ lessening
- ④ multiplying ⑤ prolonging

(2) 空欄(C)

- ① implication ② magnificence ③ attack
④ tolerance ⑤ relief

問5 下線部(7)が前後の文脈と意味の合う英文になるように、[]内の①～⑦の語を並べかえた場合、3番目と6番目に来るものの番号をそれぞれマークせよ。

(1) 3番目

(2) 6番目

問6 本文のタイトルとして最も適当なものを①～④から一つ選び、マークせよ。

- ① Do placebo pills contain active ingredients?
② How do placebo pills interact with other drugs?
③ Brain features may reveal if placebo pills could treat chronic pain
④ Blood components may reveal if placebo pills could treat various pains

【Ⅱ】 次の英文を読み、問 1～16 の選択肢①～④の中から適切なものを一つ選び、マークせよ。なお、[1]～[6] はパラグラフ（段落）の番号を表している。

[1] In his influential book *The Geography of Thought*, the psychologist Richard E. Nisbett (1941-) analyzes the difference between ways of thinking in some Asian and western countries. (His research is based mainly on comparisons between Chinese, Japanese and Korean subjects on the one hand, and American subjects on the other.) The former typically have a collectivist/holistic mindset and the latter typically have an individualist/analytic one. According to Nisbett, the difference between these two mindsets impacts on the way people talk, see and think about the world.

[2] If language reflects the way a culture sees the world, we might (as a rough approximation) say that for the west the world consists of *stable things* while for the east it consists of *changing processes*. If we compare, say, English and Chinese, the difference is apparent. English values clarity — you should say what you mean — and the subject-verb-object structure of its grammar gives prominence to things. Indeed, it even *invents* things in order to ensure that every sentence has a subject. (A), in the sentence 'It is raining, there is, of course, no *it* doing the raining — there is just the process: *raining*. Similarly in the sentence, 'The lightning flashed': there is no lightning that *does* the flashing — there is just the flashing. In Chinese, (B), many words function as both verbs and nouns, so it is easier to think of the things denoted by them as processes. (If we take seriously the idea that everything is changing all the time, then there is a sense in which all nouns are simply 'slow verbs'.) (C), Chinese is more ambiguous than English and the meanings of words tends to vary with context. This mirrors the idea that to understand something we need to look at the overall situation.

[3] Since we all have the same sense organs, we might think that we all see the world in the same way; but there are significant cultural differences in what we perceive and remember. These differences are thought by some

psychologists to stem from differences in social perception. Research indicates that westerners tend to focus on individuals, while many Asians are more sensitive to the broader social context. For example, when American and Japanese subjects were shown the cartoon in the Figure 1, the Americans judged the central figure to be happier than their Japanese counterparts did. While the Americans tended to focus on the central figure in isolation, the Japanese were influenced by the context of the sad faces in the background and qualified their judgments accordingly.

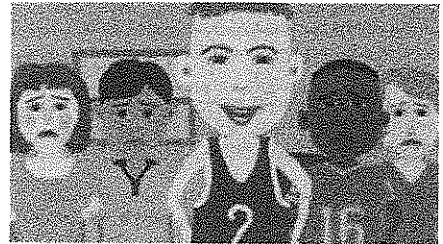


Figure 1

[4] (①) Consider, for example, the following question: 'Which is the odd one out: monkey, panda, banana?' (②) When American and Chinese subjects were asked this question, there was a marked tendency for the former to say 'banana' and the latter to say 'panda'. This is because westerners are inclined to think in terms of categories: monkeys and pandas are animals, so banana is the odd one. Asians, by contrast, tend to think in terms of relations: monkeys eat bananas, so panda is the odd one out. (③) While our own way of classifying things may strike us as 'obvious', both approaches are equally valid. (④)

[5] When it comes to logic, some people take it as axiomatic that $A = A$, while others are more aware that A may change with time and context. Westerners often take a black-and-white, either-or, right-or-wrong approach, whereas people from Asian cultures tend to have a more shades-of-grey, both-and, truth-on-both-sides style which makes them more willing to accept apparent contradictions. To illustrate, consider the following results from cross-cultural studies:

- When Americans were asked to explain the conflict between a mother and daughter, they tended to think that one person was right and the other wrong, whereas Chinese subjects tended to explain the conflict in terms of mutual misunderstanding.

- When subjects were asked to rate various proverbs, American subjects particularly liked unambiguous ones, such as 'Half a loaf is better than none', while Chinese subjects preferred seemingly contradictory ones, such as 'Too humble is half proud'.

[6] The above generalizations are based on research by cultural psychologists, and they seem to hold true even though labels such as 'Asian' and 'western' cover many different cultural traditions. Nevertheless, it is important to emphasize that they indicate trends and tendencies rather than exceptionless laws. So it is easy to find counter-examples. Indeed, there is evidence to suggest that with globalization these two styles of thinking may be converging and interpenetrating. For example, in Asia there is a strong emphasis on developing critical thinking skills; while in the West, there is great interest in Buddhism and other kinds of eastern philosophy. Rather than being locked into one or other of these two ways of thinking, some psychologists think that we can learn to switch between them as the situation demands. Therefore, perhaps analytic and holistic thinking should be seen as equally useful tools that can be used in different contexts to help us make sense of the world.

問 1 The word "subjects" in paragraph [1] is closest in meaning to ().

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- ① themes ② examinees ③ titles ④ opinions

問 2 According to paragraph [1], which of the following is NOT true?

13

- ① The Chinese have a holistic mindset.
② The Americans have an individualist mindset.
③ Some Asian peoples have a collectivist mindset.
④ The Japanese have an analytic mindset.

問 3 Look at three blanks (A), (B) and (C) in paragraph [2]. Choose the best word(s) to fit in each blank.

(1) (A)

- ① However ② Therefore ③ For example ④ Conversely

(2) (B)

- ① accordingly ② by contrast ③ that is ④ as a matter of fact

(3) (C)

- ① Instead ② Otherwise ③ In general ④ On the contrary

問 4 According to paragraph [2], what eastern view of the world is projected onto Asian language?

- ① The world is composed of something going on.
② The world consists of firmly fixed things.
③ The world is considered to be unsettled.
④ The world is consistent with motion.

問 5 The word "prominence" in paragraph [2] is closest in meaning to ().

- ① a chance ② assistance ③ evidence ④ importance

問 6 According to paragraph [2], the sentence 'The lightning flashed' shows that ().

- ① English puts emphasis on processes
② lightning usually doesn't flash
③ a subject is sometimes made up in English grammar
④ English is similar to Chinese in that it has a subject in a sentence

問 7 It can be inferred from paragraph [2] that we have to consider all the situations in understanding something in Chinese because ().

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- ① the meanings of Chinese words change along with context
- ② English is more confusing than Chinese
- ③ all verbs are simply 'slow nouns' in Chinese
- ④ Chinese is simpler than English

問 8 According to paragraph [3], which of the following is true of the way the Japanese conceive the cartoon in Figure 1? 21

- ① They pay more attention to the sad faces because they take social framework seriously.
- ② They feel sorry for sad faces because they are sensitive to psychological aspects.
- ③ They are not interested in the central figure since he is not a Japanese counterpart.
- ④ They are concerned about sad faces since they are more sensitive to tiny differences than the Americans.

問 9 Look at the paragraph [4]. Where would the following sentence best fit in the paragraph? Choose (①), (②), (③) or (④).

22

There is evidence to suggest that people from different cultures have different default reasoning styles, and that this may influence how they classify things.

問 10 It can be inferred from paragraph [4] that the Chinese think 'panda' is the odd one out because (). 23

- ① they regard matters based on validity
- ② they think about things from the aspect of categories
- ③ they perceive situations with regard to connection
- ④ they recognize things in a relationship with analogies

問 11 According to paragraph [5], people from Asian cultures tend to admit apparent contradictions because ().

- ① they have a black-and-white style
- ② they have a truth-on-both-sides style
- ③ they have a good-or-evil style
- ④ they have no shades-of-grey style

問 12 According to paragraph [5], the Chinese tend to explain the conflict between a mother and daughter ().

- ① from right-or-wrong point of view
- ② with regard for mutual rights
- ③ in terms of either-or choice
- ④ as a failure to understand on both sides

問 13 It can be inferred from paragraph [5] that the proverb 'Too humble is half proud' means ().

- ① it is very humble of you to show your weakness to others
- ② showing off your modesty too much may end up being rude
- ③ human beings are too proud to be humble
- ④ If you want to be regarded as a humble person, you should not show your pride among people

問 14 The word "cover" in paragraph [6] is closest in meaning to ().

- ① take in ② count on ③ deal with ④ build up

問 15 The expression "exceptionless laws" is closest in meaning to ().

- ① laws admitting a few exceptions
- ② inflexible principles
- ③ rules with many exceptions
- ④ useful regulations full of mistakes

問 16 According to paragraph [6], what is the author's conclusion?

29

- ① It is important for Asians to accept Western way of thinking.
- ② Globalization demands Asians and Westerners to come together as one.
- ③ It is useful to combine the Asian way of thinking with the Western one.
- ④ Western and Asian way of thinking should merge together to appreciate the world.

【Ⅲ】 次の問 1～10 に示された英文は、The Nature of Knowledge と題する一続きの文章の一部である。各英文中で文法・語法・文脈上の誤りを含むものを①～④より一つずつ選び、マークせよ。

問 1 30

The most obvious thing ①that distinguishes knowledge from belief ②is truth. If you know something, then ③that you claim to know must be true, ④but if you merely believe it, then it may be true or it may be false.

問 2 31

①This is ②because you cannot know that Rome is the capital of France, or ③that pigs have wings, or that ④the earth is flat.

問 3 32

Truth is ①another thick concept, which we shall have a lot to ②say. For the time being we can say that, as traditionally ③understood, truth is independent of what anyone happens to believe is true, and that simply believing that something is true does not make ④it true.

問 4 33

Indeed, ①even if everyone believes that something is true, it may turn out to be false. For example, during the Middle Ages, everyone thought ②they knew that there ③were seven planets ④orbited the earth (Sun, Moon, Mercury, Venus, Mars, Saturn and Jupiter).

問 5 34

①They were wrong: we now know that there ②were nine planets going around the sun. Or do we? Some astronomers ③argue that Pluto should not count as a planet ④at all.

問 6 35

This raises the question of how ①can we ②ever be sure ③that what we think we know really ④is true.

問 7 36

Perhaps in ①the future they will discover ②a tenth planet, and what we thought we ③knew ④turned out to be false.

問 8 37

①Since we are fallible ②beings, this is indeed possible. But, this simply shows that knowledge requires something ③less than ④certainly.

問 9 38

①In practice, when we say that something ②are true, we usually mean that ③it is beyond reasonable ④doubt.

問 10 39

Since we are ①willing to imprison — and in some cases execute — people on the basis of ②evidence that is beyond reasonable doubt, this is surely an acceptable ③criteria for saying ④that we know something.

【IV】 次の問 1～5 の和文の意味に合うように[]内の語句を並べかえて意味の通る英文を作り、空欄()～()に入るものを一つ選び、その番号をマークせよ。

問 1 私は、本を最後まで読まずに途中で終えるのは感心しない。

I () () () () () a book aside () () () () () through.

[① all ② don't ③ much ④ of ⑤ putting ⑥ reading it ⑦ the ⑧ think ⑨ way ⑩ without]

問 2 その道路の建設は、昔からの住人にとっては無用なものであり、税金の浪費に過ぎないと報道された。

It was reported that the construction of the highway was of () () () () and () () () () of taxes.

[① a waste ② but ③ no ④ nothing ⑤ older residents ⑥ to ⑦ use ⑧ was]

問 3 彼は、幼い頃に苦勞したこともあって、自立するのが周りの誰よりも早かった。

He stood () () () () () than anyone else () (), () () he had a hard time at an early age.

[① around ② because ③ faster ④ feet ⑤ him ⑥ his ⑦ on ⑧ own ⑨ partly]

問 4 その会社は、国内販売の減少を補うために、輸出市場に目を向けている。

The company is looking to the () () () () () () () () () sales.

[① the decline ② domestic ③ export ④ for ⑤ in ⑥ make ⑦ market ⑧ to ⑨ up]

問 5 彼女は、どんなに時代が変わっても、機械が人間の労働に取って代わるということは決してないと思っている。

She doesn't think machines are () () (48) () () (),
(49) () () time changes.

[① ever ② how ③ human ④ labor ⑤ matter ⑥ no ⑦ of
⑧ taking ⑨ the place]

