

入 学 試 験 問 題 (1次)

外 国 語

令和3年1月25日

13時10分—14時10分

注 意 事 項

- 1 試験開始の合図があるまで、この問題冊子を開かないこと。
- 2 この問題冊子は表紙・白紙を除き12ページである。落丁、乱丁、印刷不鮮明の箇所等があった場合は申し出ること。
- 3 解答には必ず黒鉛筆(またはシャープペンシル)を使用すること。
- 4 解答は、各設問ごとに一つだけ選び、解答用紙の所定の解答欄の該当する記号を塗りつぶすこと。
- 5 解答を訂正する場合は、消しゴムできれいに消すこと。
- 6 監督員の指示に従って、問題冊子の表紙の指定欄に受験番号を記入し、解答用紙の指定欄に受験番号、受験番号のマーク、氏名を記入すること。
- 7 この問題冊子の余白は、草稿用に使用してよい。ただし、切り離してはならない。
- 8 解答用紙およびこの問題冊子は、持ち帰ってはならない。

受験番号				
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I . 次の英文を読み、1～8の問題に最も適した答えを選べ。

Post-traumatic stress disorder (PTSD) is a mental illness. It has a strong connection to military combat, and appeared in ancient Greek and Roman war literature. After the American Civil War, veterans' mental problems were called "Soldier's Heart." In the late 19th century, focus changed to transportation accidents. Trauma was re-named "Railway Spine". It was believed to be a spinal injury from physical shaking. ⁽¹⁾ Later, focus moved from the heart and spine to the mind and brain. Writing in the 1880s, French neurologist Jean-Marie Charcot suggested a new illness. He called it "Traumatic Hysteria". This did not begin from *physical* effects of traumatic accident. ⁽²⁾ Instead, trauma came from the *idea* his patients created from the effects of accidents. It was a revolutionary view of mental trauma.

A few years later, after World War I (WWI) a German doctor Hermann Oppenheim also found negative effects. He called the illness "Traumatic Neuroses" and observed changes to the nervous system from emotional shock and terror. (3) accident victims and soldiers. However, his ideas were strongly opposed by his colleagues. Many doctors believed returning soldiers with trauma from combat were mentally weak, and should not receive financial support similar to soldiers with physical injury.

Sigmund Freud also thought trauma was caused by a very scary event. Freud described repeating symptoms, for example constant nightmares. The idea of "stress" came after research of veterans from WWI and WWII. "Stress" strongly influences the modern concept of PTSD. The word "stress" in the post-trauma context first appeared in medical manuals in 1952. However, the definition of "stress" is unclear. The word "stress" in PTSD has weakened focus on nervous system changes from acute emotional shock. Finally, in 1980 PTSD became recognized as an illness in mental health treatment. This was a breakthrough ⁽⁵⁾ desired by US military veterans from the Vietnam War and their

supporters, including doctors who treated them. Former soldiers finally received recognition, treatment, and also disability payments because of the negative mental consequences of their combat experience.

However, several debates from Oppenheim's time continue to today. There is still concern the validity of the PTSD diagnosis is weakened by “fake” patients desiring financial reward. Many “natural medicine” therapies はこれら ⁽⁸⁾ の患者に奇跡的な治療法があると主張しています。

Perhaps most importantly, there is also a current movement in the medical community to change the name post-traumatic stress “disorder” in war veterans to post-traumatic stress “injury”. This movement directly reflects Oppenheim's theory. His theory is also being proven in the neuroimaging laboratory, where continuing effects of psychological trauma on the brain are being discovered.

*spine/spinal : 脊椎

*neuroimaging : 神経画像解析

【Source: Pitman, R.K. (2013). A brief nosological history of PTSD. *Journal of Traumatic Stress Disorders & Treatment* 2:1, 2-5.】

1. The reason trauma was called “Railway Spine” ⁽¹⁾ is because
 - A. the spine is shaped like a train track.
 - B. train accident survivors were studied.
 - C. most railway workers had spinal injuries.
 - D. transportation was not important for doctors.

2. 下線部 “Traumatic Hysteria” の発症順序としてもっともふさわしいものを以下から選べ。⁽²⁾
- A. effects → trauma → idea
 - B. idea → trauma → accident
 - C. accident → idea → trauma
 - D. trauma → accident → effects
3. Choose the phrase that best fits (3) in the sentence.
- A. They occurred in both
 - B. They occurred in every
 - C. They occurred in either
 - D. They occurred in neither
4. Why were Hermann Oppenheim’s colleagues opposed to financial support for soldiers with trauma?
- A. There were not enough hospitals to care for these soldiers.
 - B. They believed Dr. Oppenheim’s research had low scientific value.
 - C. Compared to those soldiers, soldiers with bodily injury had stronger spirits.
 - D. It was more expensive to support soldiers with mental injury than other injury.
5. breakthrough の結果として、military veterans が獲得しなかったものはどれか。⁽⁵⁾
- A. medical care
 - B. free education
 - C. economic support
 - D. understanding they had an illness

6. What does validity mean? Choose the best answer.
(6)

- A. care
- B. truth
- C. history
- D. fiction

7. The last paragraph is *not* about

- A. how “PTSD” could change to “PTSI”.
- B. how effects of trauma can be seen with modern technology.
- C. how spinal injuries will be corrected medically in the future.
- D. how Dr. Oppenheim’s ideas may be receiving more acceptance.

8. 下線部(8)に対応する英訳の3番目と6番目にあたる適切な組み合わせを選べ。

① ② *③ ④ ⑤ *⑥ ⑦ ⑧ .

{miracle, claim, patients, have, these, to, for, cures}

	③	⑥
A	these	miracle
B	have	for
C	patients	to
D	cures	claim

II. 次の英文を読み、9～16の問題に最も適した答えを選べ。

From folk medicine to popular culture, there is a continuous fascination with how the experiences of pregnant women biologically impact their descendants. The latest wave in this discussion flows from studies of epigenetics. It is the field that analyzes heritable changes that affect gene activity but not nucleotide sequence*. Such modification has resulted in a child's future risk of obesity, diseases such as diabetes, and poor response to stress.

Headlines of the news reveal how these findings are often simplified to focus on the maternal impact: 'Mother's diet during pregnancy alters baby's DNA', 'Grandma's experiences leave a mark on your genes', and 'Pregnant 9/11 survivors transmitted trauma to their children'. Factors such as the paternal contribution, family life and social environment receive less attention.

DOHaD (Developmental Origins of Health and Disease) is expected to guide policies that support parents and children, but exaggerations and oversimplifications put the blame on mothers. It could even increase the surveillance and regulation of pregnant women. As researchers working in DOHaD and cultural studies of science, we are concerned. We urge researchers and journalists to consider the impact of irresponsible discussion.

Today, an increasing subfield in DOHaD research recognizes that fathers and grandparents also affect descendants' health. Studies suggest that diet and stress modify sperm epigenetically and increase an offspring's risk of heart disease and mental illness. In humans, the influence of fathers over mothers' psychological and physical state is increasingly recognized. So are effects of racial discrimination, lack of access to nutritious foods and exposure to toxic chemicals in the environment.

Viewed from this broader perspective, DOHaD provides a reason for policies to improve the quality of life for women and men. It must not be used to lecture individual women, as in a 2014 news report from the US media organization

National Public Radio on an epigenetics study in mice: “Pregnancy should be a time to concentrate on healthful eating if you want to avoid setting up your unborn child for a lifetime of struggling with obesity.” How are women who lack time or access to healthy foods to act on such advice?

We demand scientists, educators and reporters to be aware of how DOHaD work is likely to be used in popular discussions. Although no one denies that healthy behavior is important during pregnancy, everyone involved should be ready to explain that findings are too ⁽¹³⁾ premature to provide recommendations for daily living.

Four areas are the keys. First, avoid easily applying the results of animal studies to humans. The short lifespans and small body sizes suitable for laboratory studies often make animal models poor substitutes for human reproduction. Second, emphasize the role of both paternal and maternal effects. This can balance the tendency to link poor outcomes to maternal behavior. Third, report ⁽¹⁴⁾ complexity. The mother’s environment can raise or lower disease risk. But so too can other complex genetic, lifestyle, socio-economic and environmental factors. Fourth, recognize the role of society. Many of the pre-birth stresses that DOHaD identifies as negative effects on descendants come from social inequalities in class, race and gender. このことは、個人的な解決よりも、社会的な変化が必要なことを示唆する。⁽¹⁵⁾

Although remembering the past of ‘mother-blame’ might weaken excitement about epigenetic research in DOHaD, it will help the field to improve health without limiting women’s freedom.

* nucleotide sequence : 核酸配列

【Source: Richardson, S. et al. “Don’t Blame the Mothers” *Nature News*. 2014.】

9. epigenetics の研究対象として最もふさわしくないものを一つ選べ。
(9)
- A. How the experiences of parents impact their children.
 - B. How the changes to parents' DNA cause the future risk of obesity of their children.
 - C. How the changes to parents' DNA cause the future risk of diabetes of their children.
 - D. How the experiences of parents cause heritable modification to nucleotide sequence.
10. 2 番目の段落でニュースでのエピジェネティクス研究の成果の伝え方として、何が最も問題だと著者らは言っているか、当てはまるものを一つ選べ。
- A. 母親以外の影響を誇大に伝えている。
 - B. 母親以外の影響を十分に伝えていない。
 - C. 科学的に誤った成果を誇大に伝えている。
 - D. 育て方についての情報を十分に伝えていない。
11. 研究成果の正しくない伝え方によって生じる問題として、著者らは何を懸念しているのか、最も当てはまるものを一つ選べ。
- A. Reported results of research modify the actions of children.
 - B. Reported results of research ignore the importance of mothers.
 - C. Reported results of research lead to the right actions of people.
 - D. Reported results of research increase surveillance and regulation of pregnant women.
12. Choose the most appropriate synonym for recognizes.
(12)
- A. defines
 - B. debates
 - C. changes
 - D. acknowledges

13. Choose the most appropriate synonym for premature.
(13)

- A. fast
- B. late
- C. slow
- D. early

14. 本文中の complexity の内容として最もふさわしいものを選べ。
(14)

- A. 主に環境と遺伝子が、疾患リスクに影響すること。
- B. 幼児期の環境が、疾患リスクに影響すること。
- C. 胎児期の環境以外の要因も、疾患リスクに影響すること。
- D. 遺伝子の複雑なメカニズムが、疾患リスクに影響すること。

15. 下線部(15)に対応する英訳の3番目と10番目にあたる適当な組み合わせを選べ。

① ② *③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ *⑩
⑪ .

[solutions, than, for, this, the, need, societal, individual, changes, indicates, rather]

	③	⑩
A	need	solutions
B	the	individual
C	indicates	societal
D	for	changes

16. 最後から2番目の段落で、著者たちの主張としてふさわしくないものを、一つ選べ。

- A. 成果を複雑に伝えないこと。
- B. 社会の役割にも注意を向けること。
- C. 父親と母親の役割の影響を両方強調すること。
- D. 動物実験の結果を人間に簡単に応用しないようにすること。

III. 次の英文を読み、17～25の問題に最も適した答えを選べ。

Maps are our visual representations of the world, and they shape our understanding of the world in a lot of ways. While maps can be a wonderful teaching tool, helping us to visualize our world and our place in it, misrepresentations in maps can have profound effects on our worldview. From a historical perspective, maps from different points in time illustrate the mapmakers' priorities: What did they find important enough to include, to emphasize, to depict as larger or smaller on the map? Historian Dirk Raat, in describing how Old World peoples created maps, states that “medieval Europeans and their New World counterparts organized space according to philosophical and religious principles.” This means that their maps not only

(17) represented land size, but how they viewed themselves and their beliefs in relation to the land that they occupied. So from this early point, maps

(18) inherently held social and political weight.

In 1569, European mapmaker Gerhardus Mercator devised a new world map projection, which became very popular and is to this day a widely-used representation of the world. In the Mercator projection, straight lines on the map represent constant directions on the Earth's surface, which is very helpful for navigational purposes (one of the big reasons the Mercator projection became so popular at its creation). The Mercator projection, however, while practical, does not precisely depict area. The map stretches the parts of the world that are nearer to the North and South poles (including Europe and North America), making them appear larger than they truly are. When using a world map as a teaching tool for understanding the world, the Mercator map can be problematic because it distorts the size of land.

In the twentieth century, especially as many nations near the equator were gaining independence from imperial powers, the Mercator projection began receiving criticism for its misrepresentation of land sizes. Since many developing

nations are near the equator and therefore represented as much smaller than their actual size, critics argued a map that more precisely depicted true land size was needed. New projections depicted the world more precisely (22) land size, and have become a more popular way to teach world geography.

Nevertheless, many argue that ignorance of world geography is still dominant, especially among first-world peoples. “The True Size of Africa”, an image made by Kai Krause, illustrates a point that has been discussed (23) decades about the implications of misrepresenting land size area in world map projections. It shows the outline of the African continent which contains the entirety of the USA, all of China, India, Japan and almost all of Europe — all combined. Krause’s map makes us stop and question our view of world geography, and その見解が社会的および政治的問題にどのような影響を与えること(24)があるか。

【Source: <https://publish.illinois.edu/globalcurrents/2013/10/16/world-maps-and-worldview-social-and-political-implications/>】

17. 下線部 philosophical and religious principles を言い換えるのに最も適当な語句を以下から選べ。⁽¹⁷⁾

- A. historians of Christianity
- B. intentions of modern Europeans
- C. worldview of medieval mapmakers
- D. understanding of the New World people

18. What is the word closest in meaning to inherently?⁽¹⁸⁾

- A. carefully
- B. variously
- C. incidentally
- D. fundamentally

19. What is the word closest in meaning to devised?
(19)
- A. created
 - B. rejected
 - C. invested
 - D. separated
20. Why was the Mercator projection practical?
- A. It was used for centuries.
 - B. It was used for directing ships.
 - C. It was used to precisely depict area.
 - D. It was used to stretch parts of the world.
21. メルカトル投影法はどうして批判され始めたのか。その理由として最も不適切なものを以下から選べ。
- A. 植民地だった国々が赤道付近にあったため。
 - B. 植民地だった国々が 20 世紀に独立し始めたため。
 - C. 植民地だった国々が新しい投影法を開発したため。
 - D. 植民地だった国々が実際よりも小さく表わされていたため。
22. Choose the best phrase for (22).
- A. in flat of
 - B. in fear of
 - C. in front of
 - D. in favor of
23. Choose the best word for (23).
- A. in
 - B. to
 - C. for
 - D. with

24. 下線部(24)に対応する英訳の2番目と6番目にあたる適当な組み合わせを選べ。

[political, effects, that, could, issues, on, what, social, and, view, have]

① *② ③ ④ ⑤ *⑥ ⑦ ⑧ ⑨ ⑩
⑪ .

	②	⑥
A	view	issues
B	effects	have
C	could	view
D	that	could

25. What is the main idea of this essay?

- A. Maps accurately depict land size.
- B. Maps were invented in the equator.
- C. Maps are based on worldwide agreement.
- D. Maps have influenced our view of the planet.

