

Q 6

英 語

この冊子は、英語の問題で1ページより13ページまであります。

〔注 意〕

- (1) 試験開始の指示があるまで、この冊子を開いてはいけません。
- (2) 監督者から受験番号等記入の指示があったら、解答用紙に受験番号と氏名を記入してください。また、解答用マークシートに受験番号と氏名を記入し、さらに受験番号をマークしてください。
- (3) 解答は、所定の解答用紙に記入したもの及び解答用マークシートにマークしたものだけが採点されます。
- (4) 解答用マークシートについて
 - ① 解答用マークシートは、絶対に折り曲げてはいけません。
 - ② マークには黒鉛筆(HBまたはB)を使用してください。
指定の黒鉛筆以外でマークした場合、採点できないことがあります。
 - ③ 誤ってマークした場合は、消しゴムで丁寧に消し、消しくずを完全に取り除いたうえ、新たにマークしてください。
 - ④ 解答欄のマークは、横1行について1箇所に限ります。
2箇所以上マークすると採点されません。
あいまいなマークは無効となるので、はっきりマークしてください。
 - ⑤ 解答用マークシートに記載されている解答上の注意事項を、必ず読んでから解答してください。
- (5) 試験開始の指示があったら、初めに問題冊子のページ数を確認してください。
ページの落丁・乱丁、印刷不鮮明等に気づいた場合は、手を挙げて監督者に知らせてください。
- (6) 問題冊子は、試験終了後、持ち帰ってください。

(下書き用紙)

(下書き用紙)

- 1 次の英文を読んで設問に答えなさい。なお、*が付いている単語には本文末に注が付いているので参考にすること。(62点)

Lack of a certain kind of input during early childhood results in abnormal development in brain systems that sense, perceive, process, interpret, and act on information related to that input. Studies of Romanian infants show the importance of the early years. A perverse natural experiment placed many Romanian children in state-run orphanages at birth. Conditions in the orphanages were atrocious. The children, who received minimal social and intellectual stimulation, demonstrated cognitive delays, serious impairments in social behavior, and abnormal sensitivity to stress. The later the orphans were adopted, the poorer their recovery on average, although there are important variations among the children, reflecting the quality of orphanages and adoptive home environments as well as the length of the stay in orphanages. The Romanian studies fit with what we understand from other settings: severely neglected young children often have persisting cognitive, socio-emotional, and health problems.

Such children have problems in part because the somatosensory* bath of early childhood provides the major sensory cues responsible for organizing key areas in the brain. Absent these sensory experiences, abnormal development results. This is vividly illustrated in the smaller head size, enlarged ventricles*, and cortical atrophy* of neglected three-year-olds as compared to children who receive normal amounts of early attention.

So early circumstances are important, and attention (B). But what precisely makes the difference in these adverse early environments? The conventional measures of family disadvantage used by many social scientists are number of parents and family income. But the available evidence from developmental psychology and neuroscience suggests that these measures are very crude* proxies* for the real determinants of child outcomes. There is

much commentary on the benefits of two-parent families, but the presence of a father can be a net negative factor if he shows antisocial tendencies or if marital conflict is substantial. A large body of evidence suggests that a major ⁽¹⁾ determinant of child disadvantage is the quality of the nurturing environment rather than just the financial resources available or the presence or absence of parents. For example, a 1995 study of 42 families by Betty Hart and Todd Risley showed that children growing up in professional families heard an average of (D) words per hour, while children in working-class families heard an average of (E) words per hour, and children in welfare-recipient families heard an average of (F) words per hour. Correspondingly, they found that at age three, children in the professional families had roughly 1,100-word vocabularies, in contrast with 750 words for children from working-class families, and 500 words for children of welfare recipients.

Strengthening the observation that conventional measures of childhood adversity are (G) is a study of a Native American population that was suddenly and unexpectedly enriched by the opening of a casino. The study showed substantial improvements in baseline measures of disruptive behavior among the children. The beneficial effects of the intervention were mediated ⁽⁷⁾ by changes within the family. With more money, parental supervision of children improved, and there was greater parental engagement. In this natural experiment, income improved parenting, but it was (1. in 2. the changes ^(H) 3. parenting 4. reduced 5. that) disruptive behavior.

The worrisome news, then, is that early (1. a 2. adult 3. environments ^(I) 4. in 5. outcomes 6. play 7. powerful 8. role 9. shaping), and more and more American children are growing up in adverse environments. The good news is that environments can be enhanced to promote important skills in children and that society need not passively observe its own polarization and decline. Policy can (B).

⁽¹⁾ Experiments that enrich the early environments of disadvantaged children ^(J)

provide powerful evidence against arguments of genetic determinism. They show that enhancements of family environments can cause improvements in children's outcomes, and they underscore the role of non-cognitive skills as channels of improvement.

The most reliable data come from experiments that substantially enrich the early environments of children living in disadvantaged families. Two of these investigations, the Perry Preschool Project and the Abecedarian Project, are particularly revealing because they use a random assignment design and continue to follow the children into their adult years.

These studies demonstrate substantial positive effects of early environmental enrichment on a range of cognitive and non-cognitive skills, school achievement, job performance, and social behaviors—effects that persist long after the interventions have ended. Other studies—such as the Nurse-Family Partnership, which visits pregnant girls and teaches them prenatal health practices and parenting—support these conclusions.

注：somatosensory 体で感じられる刺激の

ventricles 脳室, 脳髓の中心近くの小さい空洞

cortical atrophy 大脳皮質の萎縮

crude 不十分な, 不完全な

proxies 代わりの物, 代用品

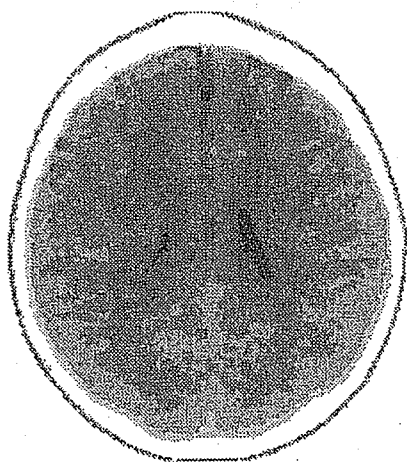
(1) 下線部(A)の内容としてもっとも適切なものを次の1～4から選び、解答用マークシートにマークしなさい。

- 1 An orphan who gets a new family later than others cannot obtain average ability.
- 2 In general, it is better for orphans to find new families sooner rather than later.
- 3 On the whole, an orphan who is given a chance to change later than other orphans tend to be less rich and less healthy.
- 4 Orphans are given relatively less choice and thus they are likely to be poor compared to ordinary citizens.

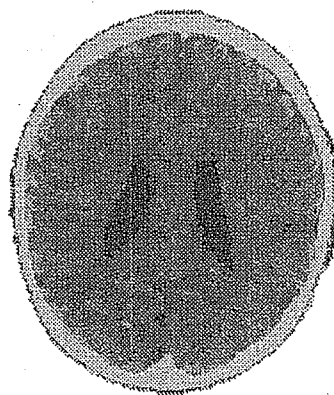
(2) 下線部(ア)～(オ)の意味としてもっとも適切なものを次の1～6から選び、解答用マークシートにマークしなさい。ただし、同じものを2度以上使用しないこと。

- 1 a situation where people are divided into two sharply contrasting groups
- 2 giving you interesting information that you did not know before
- 3 lasting or permanent
- 4 relating to the relations between a married couple
- 5 the action of interfering in any affair so as to affect its course or issue
- 6 unreasonable or unacceptable

- (3) 以下は 'a healthy three-year-old with an average head size' と 'a three-year-old suffering from severe neglect' の脳の画像です。2つの脳の画像のうち、
'a three-year-old suffering from severe neglect' の脳の画像として正しいもの
を選び、その番号を解答用マークシートにマークしなさい。



1



2

- (4) 空所(B)は2箇所あるが、(B)に共通して入るもっとも適切な動詞
を1～4から選び、解答用マークシートにマークしなさい。なお、選択肢の動
詞は全て原形で書かれているが、文中では語尾が変化する場合がある。

1 change

2 differ

3 lead

4 matter

- (5) 下線部(C)の問いの答えとして筆者が考えているものを句読点を含む10字以
上20字以内の日本語でまとめ、解答用紙に記入しなさい。

- (6) 空所(D)～(F)に入るもっとも適切な数字を次の1～3から選び、
解答用マークシートにマークしなさい。ただし、同じものを2度以上使用しな
いこと。

1 616

2 1,251

3 2,153

(7) 空所(G)に入るもっとも適切な語を次の1～4から選び、解答用マークシートにマークしなさい。

1 accurate 2 inaccurate 3 insignificant 4 significant

(8) (H)の括弧内の語を文意が通るようにもっとも適切な順序に並び替え、並べた順序に従ってその番号を上から順に解答用マークシートにマークしなさい。

(9) (I)の括弧内の語を文意が通るようにもっとも適切な順序に並び替え、並べた順序に従ってその番号を上から順に解答用マークシートにマークしなさい。

(10) 下線部(J)の内容としてもっとも適切なものを次の1～4から選び、解答用マークシートにマークしなさい。

1 Experiments show that a child born in a rich family can be more successful than a child born in a disadvantaged family.

2 Experiments show that children born in adverse environments often have persisting cognitive or social problems even if their environments are enriched later.

3 Experiments show that if we can enrich children's early environments, it is possible that children born in disadvantaged families can improve their cognitive or social skills.

4 Experiments show that whether or not children have cognitive or social problems is determined by their genes.

(11) 下線部(K)の these conclusions の指す内容を含んだ一文を本文中から探し出し、その文の最初と最後の単語を解答用紙に英語で記入しなさい。

2

Read the following dialogue between Yumi, a Japanese student studying biotechnology in London, and her supervisor Mary, and answer the questions that follow. Notes are given at the end of the dialogue on the words marked with*.

(38 点)

Mary: Hello, Yumi. How are you?

Yumi: I'm fine. Thank you.

Mary: Have you thought about what you'll do once the PhD* is finished?

Yumi: (ㄹ)! It's actually rather scary*. I know I don't want to abandon science and become an accountant, but beyond that ...

Mary: Well, let's start with a simple choice. Academia or industry?

Yumi: Oh, easy.—academia. I've really enjoyed the teaching I've done, so I don't want to (a) that up.

Mary: But in industry you could supervise more junior researchers. You wouldn't have to give up teaching.

Yumi: No, but it's different. I find it really interesting to explain quite complex topics. Supervising people would be more practical. I really love communicating the theory side of things.

Mary: Well, yes ... but I don't think working in industry rules that out*. It would just be different. You would also be out in the field more. Someone would pay you to go to real disasters* to try the robots out.

Yumi: Hm. That's true. But I'm not so interested in doing that. As (I) work on developing the robots in the lab, that's fine for me. I do really want to teach though. I actually quite enjoy preparing lectures and thinking of creative ways to (b) the information across.

Mary: Really? OK, so assuming you go for academia ...

Yumi: I'd like to get a post-doc* position first.

Mary: OK. And any idea who you'd like to work with? Or where you're looking at?

Yumi: Not really ... (イ).

Mary: Oh? You don't like London? The university?

Yumi: Yes, I do ... but I did my Master's here, part-time, while I was working as a research assistant in the lab. And then I transferred to the PhD while still working. So, basically I've done everything here, and I really think I should change, move on.

Mary: (ウ). Going somewhere else is a very good idea — I hadn't realised you'd been here for so many years.

Yumi: I came on a student visa nine years ago and never went back. Anyway, applications for a couple of interesting post-docs at Cambridge close early next month.

Mary: (エ)! I'll (c) over them before you send them off, if you like.

Yumi: That'd be great. I doubt they'll want me, but (II) a go*. And then I'm meeting a couple of people from the University of Glasgow at the conference next month. (オ).

Mary: Well, it sounds like you're doing the right things. So then you'd be looking at a full-time position in higher education after that?

Yumi: Yes.

Mary: And all the paperwork doesn't put you off?

Yumi: Well, I don't actually mind it that much. (カ).

Mary: And the money? You (III)?

Yumi: Not at all. Well, maybe a bit. But there are more important things than money. I (IV) way. But industry work? (キ).

Mary: But it's good to know it's there as a possibility.

Yumi: That's true — if things don't (d) out ...

Notes : PhD 学術博士号(の取得) ; scary こわいくらい心配な

rules that out そのことを不可能にする

go to real disasters 実際の被災地へ行く(Yumiの専門はにおいをかぎ
わけるロボットの開発であり、それが救助犬の代わりに被災地などで
使用できることを示唆する。)

post-doc 博士課程修了後の研究者 ; go 試み

(1) Which of the following best fits into the blanks from (ア) to (キ)?

Select the number of the best answer for each and mark your answer **on the mark sheet**. Note that each choice can be used only one time.

- 1 I don't think of much else
- 2 I'm going to leave here, though
- 3 I really don't think it's for me
- 4 Just for a chat
- 5 So no, it doesn't bother me
- 6 They get earlier every year
- 7 You're quite right

(2) Which of the following best fits into the blanks from (a) to (d)?

Select the number of the best answer for each and mark your answer **on the mark sheet**. Each choice can be used only one time.

- | | | | |
|-------|--------|--------|--------|
| 1 get | 2 give | 3 look | 4 work |
|-------|--------|--------|--------|

(3) For the blanks from (I) to (IV), arrange the following in the right order so that the meaning matches the content, and mark your answer on the mark sheet. Each number can be used only one time.

(I)	1 as	2 do	3 I
	4 have	5 long	6 time
	7 to		

(II)	1 as	2 give	3 I
	4 it	5 might	6 well

(III)	1 are	2 by	3 in
	4 industry	5 not	6 tempted
	7 the salaries		

(IV)	1 get	2 going	3 I'm
	4 know	5 not	6 rich
	7 this	8 to	

(4) Which of the following best describes Yumi's future plans? Select the number of the best answer and mark it on the mark sheet.

- 1 Her main focus is to increase her research experience by interacting with other young scientists.
- 2 She feels affection for her university in London and wishes to continue studying there.
- 3 She prefers finding a permanent position at university to finding a well-paid job.
- 4 She wants to develop certain robots that can be used in various industries.

