

英 語 (全6の1)

I 次の英文を読んで、以下の問いに答えよ。

In an article published in the journal, *Physiological Reports*, researchers write about an experiment in which they measured levels of melatonin, a hormone that regulates sleep, in a group of 10 children aged between 3 and 5. First, they had the children follow a regular sleep schedule for five days, and checked their *saliva several times a day to measure their baseline levels of melatonin. Then, on the sixth day, they turned children's homes into low-light "caves," covering the windows with black plastic film and changing to (1) light bulbs.

"We know from a lot of studies done in adults, adolescents, and school children, that the body clock is very sensitive to light exposure," said Dr. Lameese Akacem, an instructor at the University of Colorado, Boulder. (2) in the evening, it tends to lower the level of the sleep-promoting hormone, melatonin. A child who is resisting being put to bed may come out of the dark bedroom and approach the parents in rooms where lights are on, she said, and "they get blasted with light. Just even a short (3) of bright light may suppress melatonin and shut down that sleep-promoting effect." The average bedtime for the children in the study was 8:27 p.m.; the researchers found that the children began producing melatonin, on average, at 7:47 p.m., marking the beginning of their "biological night."

Melatonin production is usually low during the day, and then (4) in the evening, causing the body clock to prepare for sleep. The melatonin comes from the pineal gland, located between the two *hemispheres of the brain, which is neurologically connected to body clock central, which in turn is influenced by how much light gets through to the *retina in the eye.

"One important (5) is that parents should avoid having children exposed to very bright light before bedtime," Dr. Akacem said. This study finds it important to look in more detail at young children's sensitivity to light, so that researchers can make more specific practical recommendations to parents. So, an hour before bedtime, parents might consider turning off bright overhead lights. Dimming the light allows melatonin to rise in its natural pattern. She also stressed the importance of a regular consistent bedtime, even on weekends, for children in this age group, and putting them to bed before 9:00 p.m., early enough so that they get all the sleep they need.

(Klass, P. (2018). *New York Times* より一部改変)

*saliva 唾液

*hemisphere 半球

*retina 網膜

英 語 (全6の2)

1. 本文の空所(1)～(5)に入れるのに最も適切な語を、下記の(a)～(d)からそれぞれ1つ選び、その記号をマークせよ。

- | | | | |
|------------------------|------------------|-----------------|---------------------|
| (1) (a) high-intensity | (b) high-wattage | (c) low-wattage | (d) previously-used |
| (2) (a) Extremely | (b) Particularly | (c) Absolutely | (d) Unfortunately |
| (3) (a) resolution | (b) protection | (c) concealment | (d) exposure |
| (4) (a) drops | (b) plunges | (c) rises | (d) collapses |
| (5) (a) tip | (b) superstition | (c) weakness | (d) disbelief |

2. 各問いの答えを、それぞれ(a)～(d)より1つずつ選びマークせよ。

- (1) According to the article published in the journal, *Physiological Reports*, what was the purpose of the experiment?
- (a) To regulate the amount of sleep in 10 young children
(b) To check the saliva in children aged from three to five years old
(c) To understand the relationship between light and sleep
(d) To turn children's homes into low-light caves
- (2) Which of the following is true of the body clock?
- (a) It is susceptible to be active in young adults, adolescents and school children.
(b) It tends to promote sleep in the hormone, melatonin.
(c) It is inclined to be regulated by contact with light.
(d) It resists the sleep pattern in a dark bedroom where lights are on.
- (3) On average, when was the production of the hormone, melatonin, initiated?
- (a) Before 8:00 in the evening
(b) Between 7:47 and 8:47 in the morning
(c) Towards the erosion of the biological night
(d) When the sleep-promoting effect is suppressed
- (4) Where does the melatonin originate from?
- (a) It comes from the retina in the eye, which is influenced by the light absorption.
(b) It is neurologically connected to the ears, nose, and throat.
(c) It comes from a gland that is positioned between the two hemispheres of the brain.
(d) It is found in the body clock central, which is usually low during the day.
- (5) What is important to consider for children to get enough sleep?
- (a) Parents should avoid being exposed to bright lights before bedtime.
(b) To lay the foundation for looking at young children's ability to read
(c) To turn off bright overhead lights to let melatonin function
(d) Parents should have children go to bed inconsistently on weekends.

英 語 (全6の3)

Ⅱ 次の(1)～(7)の()に入れるのに最も適切なものを、下の(a)～(d)からそれぞれ1つずつ選び、その記号をマークせよ。

- (1). The light () the ceiling is broken.
(a) above (b) on (c) at (d) over
- (2). Who () the tickets to London?
(a) did (b) bought (c) do (d) went
- (3). The toy was given to () on his birthday.
(a) he (b) their (c) him (d) they
- (4). The bear in () cage is from another zoo.
(a) some (b) both (c) a (d) the
- (5). She plays baseball ().
(a) every weekend (b) this weekend (c) today (d) yesterday
- (6). This car runs fast () it is equipped with a good engine.
(a) because (b) then (c) but (d) although
- (7). Water () at 100 degrees Celsius.
(a) boiling (b) boil (c) boils (d) boiler

Ⅲ 各英文の()の部分に、下記の(ア)～(キ)の語句を入れて、それぞれの日本語と対応するように、英文を完成させなさい。ただし、マークシートには、(X)に入る語のカタカナのみをマークしなさい。(※文頭に来る文字も、小文字になっています。)

1. 誰が今年ノーベル平和賞を取ると思いますか？
() () () () (X) () () Nobel Peace Prize this year?
[(ア) win (イ) will (ウ) who (エ) think (オ) do (カ) the (キ) you]
2. 海の上のあの飛行機には、私の祖父がいる。
() () () () (X) () () the sea.
[(ア) is (イ) above (ウ) grandfather (エ) that (オ) plane (カ) on (キ) my]

英 語 (全6の4)

3. この地域では、新鮮な野菜を売っているお店がたくさんある。
() () () () (X) () () in this area.
[(ア) fresh (イ) are (ウ) stores (エ) there (オ) selling (カ) vegetables (キ) many]
4. 昨日お店に行っていれば、その帽子を買えたでしょう。
If you () () () () yesterday, you (X) () () the cap.
[(ア) have (イ) had (ウ) store (エ) bought (オ) visited (カ) the (キ) could]
5. テーブルの上のコーヒーは自由にお飲みください。
() () () () (X) () () table.
[(ア) yourself (イ) help (ウ) the (エ) coffee (オ) to (カ) on (キ) some]
6. その点を事前にお伝えしておくべきでした。
() () () () (X) () () beforehand.
[(ア) you (イ) told (ウ) I (エ) should (オ) have (カ) that (キ) point]

Ⅳ 次の英文(a)～(g)の中から、正しくない表現を含む英文を3つ選び、その記号をマークせよ。

- (a) We are proud to support a range of charities across the UK working to raise literacy levels through reading for pleasure.
- (b) During a news conference on Tuesday, the politician announced that he would resign his position due to scandal.
- (c) During the late 1940s and through the 1950s, UFOs were often refer to popularly as “flying saucers.”
- (d) It is not necessarily true that the act of watching TV cuts down on the time kids spend exercising.
- (e) The retirement age in most countries in the world is expected to gradually increase to 67 years old by 2030.
- (f) In this increasingly digital world, it is becoming much easier to work from home.
- (g) Due to advances in technology, it is becoming more common to talk to a computer and listen to it's reply.

英 語 (全6の5)

V 下の会話を読んで、(1)～(8)の()内に入れるのに最も適切な表現を、下記(a)～(d)からそれぞれ1つずつ選び、その記号をマークせよ。

Jim: Hi Akiko, how've you been? I haven't seen you for a long time!
 Akiko: Oh, hi Jim! Yes, it's been a while, (1)? I've just come back from a trip to the UK.
 Jim: The United Kingdom? What did you do over there?
 Akiko: Well, it's a long story, but I went there on business for my company. I was needed in the London office.
 Jim: That sounds exciting! (2) did you stay in Europe?
 Akiko: Just for six months, but the time went by really fast. I had a great time.
 Jim: Did you have any opportunities to travel around?
 Akiko: As a (3), yes, I did! First, I travelled all over the UK. I went to Birmingham, Liverpool and Edinburgh. Then I went to Ireland, France, Switzerland and Italy.
 Jim: That's awesome! By the way, I hear that the UK will leave the EU next year. What do you think of Brexit?
 Akiko: I think it is (4) because it will make travelling around Europe more difficult for British citizens. Also, I think the cost of products will increase because of import duties and so on.
 Jim: Yes, I understand... Well, (5), what was the best part of your trip?
 Akiko: That's difficult to say... I (6) working in London because the people were very friendly and I really liked going to the pub after work! I also enjoyed going to museums, eating out in restaurants and just looking at buildings and taking pictures (7) I visited.
 Jim: You take some great pictures. I'd love to see them sometime!
 Akiko: OK, I'll show them to you someday. I don't have time now, though. I have to get going.
 Jim: Sounds good. Look (8). See you later, Akiko.

- | | | | |
|-------------------------|----------------------|--------------------|-------------------|
| (1) (a) hasn't it | (b) isn't it | (c) is it | (d) has it |
| (2) (a) Why | (b) Where | (c) How long | (d) How much |
| (3) (a) way of thinking | (b) matter of fact | (c) thing to say | (d) no wonder |
| (4) (a) unfortunate | (b) fortunate | (c) lucky | (d) luckily |
| (5) (a) speak me | (b) say me | (c) teach me | (d) tell me |
| (6) (a) was hardly | (b) absolutely hated | (c) really enjoyed | (d) has it |
| (7) (a) with the camera | (b) of the places | (c) at the time | (d) in the moment |
| (8) (a) forward to it | (b) behind you | (c) over there | (d) around you |

英 語 (全6の6)

VI 次の各設問について、4語の英単語のうち、日本語を英訳する際に通常使用しない1語を選びなさい。なお、文頭に来る文字も小文字になっています。

(例) 明日の朝、仕事へは車で行く。

- (a) by
 (b) to
 (c) until
 (d) go

英訳例は“I will go to work by car tomorrow morning.”なので、使用することが想定できない“until”の左側にある(c)をマークする。

- 昨日見た映画は面白かった。
 (a) saw
 (b) was
 (c) with
 (d) the
- 電気自動車の数が増えている。
 (a) number
 (b) largest
 (c) is
 (d) cars
- 分厚い本を読み終えるには時間がかかる。
 (a) covers
 (b) thick
 (c) book
 (d) time
- 英語のスピーキングテストには、たくさん種類がある。
 (a) all
 (b) kinds
 (c) of
 (d) many
- 公園で、家族とお弁当を食べることは楽しい。
 (a) is
 (b) park
 (c) with
 (d) under