

# 英語

(1~13ページ)

## 注意

- 試験開始の合図があるまで、問題用紙を開いてはいけません。
- 解答用紙に受験番号・氏名を記入しなさい。  
受験番号は、下記の「受験番号欄記入例」に従って正確にマークしなさい。
- 解答用紙にはマーク式解答欄の番号が **1** ~ **50** までありますが、使用しない解答欄も含まれています。
- 試験時間は **60分** です。
- 試験開始後、問題用紙に不備(ページのふぞろい・印刷不鮮明など)があったら申し出なさい。
- 問題の内容についての質問には、いっさい応じられません。
- 中途退出は認めません。試験終了後、この問題用紙は持ち帰りなさい。

### 受験番号欄記入例

| 受験番号欄 |   |   |   |   |
|-------|---|---|---|---|
| Y     | 8 |   | 5 | 0 |
| ①     | ① | ① | ① | ① |
| ②     | ② | ② | ② | ② |
| ③     | ③ | ③ | ③ | ③ |
| ④     | ④ | ④ | ④ | ④ |
| ⑤     | ⑤ | ● | ⑤ | ⑤ |
| ⑥     | ⑥ | ⑥ | ⑥ | ⑥ |
| ⑦     | ⑦ | ⑦ | ⑦ | ⑦ |
| ⑧     | ⑧ | ⑧ | ⑧ | ⑧ |
| ⑨     | ⑨ | ⑨ | ⑨ | ⑨ |

アルファベットと数字の位置に注意してマークしなさい

### マーク式解答欄記入上の注意

- 解答は、HBの黒鉛筆を使用して丁寧にマークしなさい。  
《マーク例》  
良い例 ●  
悪い例 ⓠ ⓡ ⓢ ⓣ ⓤ
- 訂正する場合は、プラスチック消しゴムで、きれいにマークを消し取りなさい。
- 所定の記入欄以外には、何も記入してはいけません。
- 解答用紙を汚したり、折り曲げたりしてはいけません。

I 次の英文 (1) ~ (6) の空所 1 ~ 6 を埋めるのに最も適切なものを、それぞれ下の選択肢①～④から 1 つずつ選びなさい。

(1) The number of tourists visiting the island (1) by 10% since last year.

① are rising      ② is rising      ③ has risen      ④ have risen

(2) I was walking toward the station when I heard an ambulance siren (2).

① approaching      ② to be approached  
③ to be approaching      ④ is approached

(3) (3) busy he is, he always makes time for his family.

① No matter      ② Despite      ③ Although      ④ However

(4) My son denied (4) the juice, but the sticky floor revealed the truth.

① that he spills      ② to spill  
③ to have spilled      ④ spilling

(5) The new coffee shop around the corner has (5) atmosphere than the crowded one we used to go to.

① a more better      ② the very best  
③ better at      ④ a far better

(6) I bought ten antiques online, two of (6) were broken.

① it      ② them      ③ which      ④ that

II 次の英文 (1) ~ (6) の空所 7 ~ 12 を埋めるのに最も適切なものを、それぞれ下の選択肢①～④から 1 つずつ選びなさい。

(1) The restaurant had a (7) number of vegetarian options, which was disappointing for my vegetarian friend.

① small      ② few      ③ less      ④ quite

(2) Joe asked his parents for (8) to study abroad next year.

① admission      ② impression      ③ expression      ④ permission

(3) The environmental group (9) the construction of the new power plant.

① disagreed      ② opposed      ③ objected      ④ complained

(4) Travel guidebooks keep tourists well (10) about the best places to visit and things to do.

① informal      ② informed      ③ informative      ④ informational

(5) I am (11) to read the book you talked about.

① much      ② ever      ③ yet      ④ very

(6) I still (12) you \$100 for the concert ticket you paid for last month.

① borrow      ② owe      ③ rent      ④ lend

III 次の英文(1)～(6)の空所 13 ～ 18 を埋めるのに最も適切なものを、それぞれ下の選択肢①～④から1つずつ選びなさい。

(1) The government is taking steps to help people (13) the high cost of living.

|           |             |
|-----------|-------------|
| ① come up | ② go over   |
| ③ hit on  | ④ cope with |

(2) In mathematics, "x" often (14) an unknown value.

|             |              |             |              |
|-------------|--------------|-------------|--------------|
| ① calls for | ② stands for | ③ occurs to | ④ attends to |
|-------------|--------------|-------------|--------------|

(3) We (15) on our trip early in the morning to avoid traffic and reach our destination before noon.

|           |             |             |            |
|-----------|-------------|-------------|------------|
| ① set out | ② went into | ③ ruled out | ④ run into |
|-----------|-------------|-------------|------------|

(4) These cherry blossoms are in full bloom now, but they will start to fall (16).

|             |            |           |               |
|-------------|------------|-----------|---------------|
| ① above all | ② in short | ③ on time | ④ before long |
|-------------|------------|-----------|---------------|

(5) My colleague Jason is (17) the new project in the North American region.

|               |                 |               |                |
|---------------|-----------------|---------------|----------------|
| ① in honor of | ② in respect of | ③ in terms of | ④ in charge of |
|---------------|-----------------|---------------|----------------|

(6) The increasing popularity of social media (18) new concerns about privacy and security.

|                  |                |
|------------------|----------------|
| ① took notice of | ② gave rise to |
| ③ put up at      | ④ made way of  |

IV 次の英文を読み、空所 **19** ~ **23** を埋めるのに文脈上最も適切なものを、それぞれ下の選択肢①~④から 1 つずつ選びなさい。\*の付いた語には [Notes] があります。

Consciousness is so rapidly and dramatically reduced during sleep that it was natural to assume that the brain simply turned off at sleep onset and turned on again just before awakening. **19**, some people do sleep all night in that deep, oblivious\*, and uninterrupted way. Some, but by no means all. And no one sleeps that way all the time. There are periods of life change and stress when mental activity seems to **20** all night. Are these to be attributed to our not really being able to sleep at such times? Perhaps. But what about dreaming? How could such elaborate and exciting mental activity arise in an inactive brain?

This question was answered in a wide variety of erroneous\* ways. As dream recall was generally **21** and needed awakening to be present at all, many scientists — Sigmund Freud\* among them — wrongly assumed that dreaming occurred only in the instant before awakening. Now it is certainly true that dreaming can occur just before awakening. And we have already noted that dreaming can be so unpleasantly exciting as to provoke\* awakening, leading to another erroneous assumption: that all dreams are unpleasantly exciting, i.e., all dreams are characterized by **22** emotions such as anger, anxiety, or fear.

Another erroneous theory was that dreaming arose in response to external sensory stimuli\* that were strong enough to activate the brain but not strong enough to produce arousal\*. Again, it is true that train whistles, indigestion\*, and spouses coming home late can influence dream content. But they often don't, and dreaming doesn't depend on such stimuli **23** they do gain entry to the sleeping brain.

Adapted from J. Allan Hobson, *Dreaming: A Very Short Introduction*,  
Oxford University Press (2005)

[Notes]

oblivious 「～に気づかないで」 erroneous 「誤った」

Sigmund Freud 「ジークムント・フロイト (オーストリアの精神科医で、精神分析の創始者)」

provoke 「～を引き起こす」 stimuli (stimulus の複数形) 「刺激」 arousal 「覚醒」

indigestion 「消化不良」

**19** ① However ② Similarly ③ Thus ④ Indeed

**20** ① drop in ② leave behind ③ call off ④ go on

**21** ① poor ② excellent ③ vivid ④ useful

**22** ① indifferent ② negative ③ objective ④ neutral

**23** ① because ② in no time ③ even when ④ as though

英語の試験問題は次に続きます。

V 次の英文を読み、24 ~ 28 の各文を完成させるのに最も適切なものを、それぞれ下の選択肢①～④から 1 つずつ選びなさい。\*の付いた語には [Notes] があります。

Plant owners know just how difficult it can be to figure out what their plants need, especially when leaves start browning or wilting\*. But it turns out that plants may have been telling you all along. A new study found that when plants are stressed, they emit specific sounds that identify what's wrong.

Previous studies had shown that plants vibrate when under stress, but for years, scientists have debated whether those vibrations become sound waves. By studying tomato and tobacco plants in an acoustic chamber inside a greenhouse, researchers at Tel Aviv University discovered that it's true — plants cry out for help through airborne ultrasonic sounds.

"We found that plants usually emit sounds when they are under stress and that each plant and each type of stress is associated with a specific identifiable sound," researchers said in a news release from the university. "While imperceptible to the human ear, the sounds emitted by plants can probably be heard by various animals, such as bats, mice, and insects."

Human adults can only hear frequencies up to 16 kilohertz, researchers said, but ultrasonic microphones placed about 10 centimeters from each plant used in the study detected sounds at frequencies between 20 and 250 kilohertz. Those recordings were analyzed by special AI algorithms that could differentiate between plants and the types of sounds they were emitting.

And the more stressed plants were, the more they screamed.

"Unstressed plants emitted less than one sound per hour, on average," researcher Lilach Hadany said, "while the stressed plants — both dehydrated\* and injured — emitted dozens of sounds every hour."

They also found that after a certain peak of dehydration, the sounds would simply stop. Their findings were published in the journal *Cell*.

"Our findings suggest that the world around us is full of plant sounds, and that these sounds contain information — for example about water scarcity or injury," Hadany said. "We assume that in nature, the sounds emitted by plants are detected by creatures nearby, such as bats, rodents\*, various insects, and possibly also other plants — that can hear the high frequencies and derive relevant information."

"But it's not just small animals and insects that can use this information but humans too," Hadany said. "All we need are the right tools — such as sensors that tell us when plants need watering."

This could prove particularly beneficial in the agriculture industry, as researchers noted in their publication that "more precise irrigation can save up to 50% of the water expenditure and increase the yield." This ability could only become more important as climate change continues to increase the intensity and frequency of droughts and the world continues to grapple\* with food security issues.

"Apparently, an idyllic\* field of flowers can be a rather noisy place," Hadany said. "It's just that we can't hear the sounds."

Adapted from Li Cohen, "Plants emit a "rather noisy" cry for help when under stress, scientists find,"

*CBS News* (March 31, 2023)

## [Notes]

wilt「しおれる」 dehydrated「乾燥した」 rodents「げっ歯類」 grapple「取り組む」  
 idyllic「のどかな、牧歌的な」

**24** The researchers at Tel Aviv University found that

- ① many plants kept vibrating, but they did so without producing any sounds.
- ② most plants were inclined to produce sounds just before their leaves turned brown.
- ③ plants generated their own specific sounds that represented each kind of stress they were experiencing.
- ④ tomato and tobacco plants in a greenhouse emitted sounds, while their wild counterparts did not.

**25** According to the fourth paragraph,

- ① human adults are unable to hear any of the frequencies emitted by plants.
- ② human adults can train themselves to hear frequencies higher than 16 kilohertz.
- ③ the average frequency of sounds emitted by plants is 200 kilohertz.
- ④ ultrasonic microphones pick up frequencies that are perceptible to humans.

**26** According to the researcher Lilach Hadany,

- ① the plants not under stress did not make any sounds.
- ② the plants under stress made only a few sounds per hour.
- ③ water-deprived and injured plants emitted a lot of sounds every hour.
- ④ water-deprived plants produced more sounds than injured plants.

**27** The researchers, including Lilach Hadany,

- ① demonstrated that plants can detect the sounds emitted by small creatures around them.
- ② implied that plants make use of creatures nearby to emit sounds.
- ③ showed that at peak dehydration, plants emit the most sounds.
- ④ suggested that small animals and insects can understand what plants are trying to convey.

**28** The discovery mentioned in the passage could contribute to agriculture in that

- ① by analyzing plant sounds, it is possible to water crops more efficiently.
- ② by having plants emit sounds, they can reduce stress on their own.
- ③ by making insects listen to plant sounds, the yield will increase.
- ④ by paying attention to plant sounds, global warming can be slowed.

VI

A 次のチャットでの会話文を読み, 29 · 30 の各問の答えとして最も適切なものを, それぞれ下の選択肢①~④から 1 つずつ選びなさい。

Hey, you said you'd pick up dinner on your way home. What did you end up getting? I'm starving!

Amanda [5:30 p.m.]

Sorry. I just noticed your text now.

James [6:00 p.m.]

No worries. So, what did you get?

Amanda [6:01 p.m.]

Forgive me. I completely forgot. But I'm almost home. What should we do?

James [6:02 p.m.]

How about ordering pizza?

Amanda [6:03 p.m.]

Or we can go to the new Chinese restaurant near our apartment.

James [6:05 p.m.]

Sounds good. Let's eat there.

Amanda [6:07 p.m.]

29 Where is James right now?

- ① At the station.
- ② On the train.
- ③ Near their apartment.
- ④ At the restaurant.

30 What will James most likely do next?

- ① Ask Amanda what to do.
- ② Visit a Chinese restaurant with Amanda.
- ③ Pick up some food to go from a restaurant.
- ④ Order pizza.

B 次の案内文を読み、31 ~ 33 の各問の答えとして最も適切なものを、それぞれ下の選択肢①~④から1つずつ選びなさい。

### Notice

Starting on June 1st, we will be closing Marine Station's south exit for renovations. They are expected to be completed in early October. We sincerely apologize for any inconvenience this may cause you.

Please use the north exit during this time. Please also note that the north exit elevator and restrooms will still be accessible, but the tourist office will be closed. A much larger office will be built at the south exit to accommodate more tourists. Thank you for your understanding.

### New Marine Station South Exit

With renovations starting soon, here are several changes you can expect to see. We are hoping the renovations will make life more convenient for passengers and nearby residents.

- In addition to the elevator at the north exit, a second one will be built at the south exit, allowing those who cannot take the stairs to the platform.
- The south exit restrooms will be renovated to include more stalls.
- A new café and convenience store will be opening on the ground floor just outside the south exit.
- Artworks from local residents will be displayed next to the improved tourist office beside the south exit ticket gates.

31 What does the notice indicate?

- ① The station will be closed temporarily.
- ② Users must come back in four months.
- ③ The whole station will be renovated.
- ④ Part of the station will be inaccessible.

32 What is the reason for the renovations?

- ① To replace the existing damaged facilities.
- ② To make the station more user-friendly.
- ③ To take up less space in the neighborhood.
- ④ To encourage residents to take the train more often.

33 What is likely to be one of the main problems with the current station?

- ① Wheelchair users must go all the way to the north exit to access the platform.
- ② There are currently no restrooms at the station for passengers to use.
- ③ The ticket gates are too close to the existing café and convenience store.
- ④ Tourists can't access tourist information as there is no tourist office.

VII 次の **34** ~ **39** の英訳文を完成させるように、( ) 内の①~⑦を並べかえ、その 7 つの中で 4 番目にくる語句の番号を選びなさい。なお、( ) の中では、文のはじめにくる語句も小文字になっています。

**34** よく考えた結果、彼はその車を購入しないことにした。

After much thought, (①purchase ②has ③the car ④not ⑤he ⑥to ⑦decided).

**35** 金が貨幣として使用されてきた長い歴史がある。

There is (①gold ②as ③a long history ④used ⑤being ⑥of ⑦currency).

**36** あなたは他人に迷惑をかけないくらいの分別があるべきだ。

You should (①cause ②than ③for ④better ⑤trouble ⑥know ⑦to) others.

**37** チームマネージャーは、物事の進め方について具体的な指示を与えることが期待されている。

A team manager is supposed to give specific instructions (①to ②done ③on ④are ⑤things ⑥how ⑦be).

**38** あなたと同じくらい手頃な値段でチケットが手に入ることを願っています。

I hope to get tickets (①did ②a ③as you ④reasonable ⑤as ⑥price ⑦at).

**39** ヘルメットをかぶることで、自転車の運転中に頭を怪我するのを防ぐことができる。

(①can ②injured ③your head ④from ⑤wearing a helmet ⑥keep ⑦getting) while riding a bicycle.

VIII 次の [40] ~ [45] の英文を完成させるように、[ ] 内の①~⑤を並べかえ、その5つの中から3番目に入る語句の番号を選びなさい。なお、[ ] の中では、文のはじめに入る語句も小文字になっています。\*の付いた語には [Notes] があります。

It is [40] [①not ②individual's diet ③that ④an ⑤only] influences the risk of succumbing\* to the chronic\* diseases of developed nations. The mother's nutrition also has a significant effect. David Barker, building on earlier work, discovered that the lower a baby's birth weight, the higher the risk of heart disease, stroke, and hypertension in later life. He hypothesized\*, and this is now widely accepted, that if the mother suffers from poor nutrition during pregnancy, this [41] [①nutrients ②to ③her ability ④influences ⑤transfer] to the foetus\*, which in turn affects the offspring's long-term health prospects. Barker also found that [42] [①weight ②underweight ③if ④rapidly gain ⑤babies] after the age of two, their risk of later heart disease is increased. Some of these effects are direct: undernourished\* foetuses have less heart muscle and so less ability to survive damage to the heart. They also have smaller livers, and the liver controls blood cholesterol levels, which in turn affects the risk of heart disease.

But there [43] [①that ②mechanism ③has been ④is also ⑤another] uncovered in recent decades. Genes in the offspring may be turned on or off by environmental influences in the parent: a process called epigenetics. So the infant of a poorly nourished mother might have its genes programmed in [44] [①a ②to ③such ④as ⑤way] increase its susceptibility to diseases in later life. The Dutch famine of 1944-1945, which resulted from a German food embargo\*, showed the importance of maternal nutrition. [45] [①who ②babies ③mothers ④to ⑤born] were undernourished in the first three months of pregnancy during the "hunger winter" were more likely to become obese, and to suffer from chronic diseases, in later life. This could, in part, have been a result of epigenetic effects.

Adapted from John Krebs, *Food: A Very Short Introduction*,  
Oxford University Press (2013)

#### [Notes]

succumb 「～に屈する、負ける」

chronic 「慢性の」

hypothesize 「～という仮説を立てる」

foetus [fetus] 「胎児」

undernourished 「栄養不良の」

embargo 「禁輸」

英語の問題はここまでです。

