

学 部 共 通

入 学 試 験 問 題

A 日程 1 月30日

英 語

注 意 事 項

1. 試験監督者の指示があるまで、問題冊子を開かないこと。
2. 問題冊子に落丁、乱丁があった場合は、試験監督者に申し出ること。
3. 試験監督者の指示に従って、解答用紙の受験番号欄に受験番号を記入し、その下のマーク欄にもマークすること。
4. 受験番号が正しくマークされていない場合は、採点できないことがある。
5. マーク方式の解答方法は、下の『解答上の注意』をよく読むこと。
6. 試験終了後、問題冊子は持ち帰ること。

解 答 上 の 注 意

マーク方式での解答例

〔英語〕 解答群より、③をマークするときは、次の〔例〕のように解答欄の③にマークする。

〔例〕

1	①	②	●	④	⑤	⑥	⑦	⑧	⑨	⑩
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英 語

- I. ラッコ (sea otter) に関する次の英文を読み、問A・問Bに答えよ（なお、*印を付した語句には注がある）。

Humans are not alone in the use of tools. Chimpanzees, for instance, crack nuts 1 stones and use sticks to get at tasty termites*. Dolphins are known to employ sponges to protect their beaks while foraging*. And a Galapagos Islands finch* uses cactus spines to dig grubs* out of holes.

Sea otters also are members of the animal kingdom's tool-wielding* club. And a new study offers a fuller understanding of the tool use — utilizing rocks and other objects to break open hard prey — by these marine mammals. It lets the otters eat certain larger prey and reduces their tooth damage by cutting down on their chomping down on hard shells, with females using tools more than males, perhaps to compensate 2 their smaller body size and weaker bite force, researchers found.

The researchers observed 196 southern sea otters along the central California coastline — Big Sur, Monterey, San Luis Obispo, Piedras Blancas and Elkhorn Slough.

When not crushing prey with their teeth, the otters float on their backs when feeding and use rocks, shells and discarded bottles as hammers or anvils* to smash open hard-shelled prey, also sometimes bashing* prey onto the surfaces of docks and boats.

Among the prey were sea urchins*, abalone*, crabs, mussels, clams*, snails and fat innkeeper worms*. The shells of certain larger prey would be too tough, without tools, to break to gain access to the edible soft parts inside. For instance, mussels, clams and snails would 3 be unavailable.

“Tool use allows individuals to maintain energetic requirements through the processing of alternative hard prey that are typically inaccessible with biting alone, suggesting that this behavior is a necessity for the 4 of some otters in environments with limited resources,” said evolutionary biologist Chris Law of the University of Texas and University of Washington, lead author of the study published on May 16 in the journal Science.

The frequency of tool-use behavior varies, with some otters doing it more than 90% of the time when feeding and others rarely or never, according to study coauthor Rita Mehta, a University of California, Santa Cruz functional and comparative biologist.

Tool use was particularly important for the female otters. “Females need the calories. They are smaller than males, and pregnant or nursing females have elevated caloric demands. Tool-using females were shown to consume a greater portion of very large prey to help them 5 their caloric needs,” Mehta said.

The southern sea otters, a subspecies also called the California sea otter, can reach up to 1.2 meters long. Males weigh up to about 32 kilograms and females up to about 23 kilograms.

Eating hard-shelled prey, as the otters do, can lead to broken teeth.

“Without their teeth, otters can't eat and will die. Females show slightly less damage to their teeth overall, probably because of their increased tool use,” Law said.

Sea otters, the largest member of the weasel* family, generally eat food equal to about a quarter of their body weight daily as they prowl* kelp forests and seagrass beds. The population of southern sea otters along California's coastline numbers only about 3,000.

The otters were opportunistic in terms of their tools.

“Otters are intelligent mammals, and they are very strong. People who live along the bay commonly observe otters using a variety of human-discarded material as tools, from glass bottles to pieces of plastic, so otters seem flexible in what they may try to use to break open prey,” Mehta said.

(出典：Reuters, “Sea otters reduce tooth damage using tools,” *The Japan News*, May 22, 2024 一部改変)

注：termites シロアリ forage 餌を探す finch フィンチ (アトリ科の鳥)
grubs 昆虫 tool-wielding 道具を使う anvils 鉄床
bash ぶつける urchins ウニ abalone アワビ clams 二枚貝
fat innkeeper worms ユムシ (無脊椎海産動物) weasel イタチ
prowl 餌を求めてうろつく

問A. 文中の ～ に入れるのもっとも適当なものを①～④の中から選び、
解答欄にマークせよ。

- | | | | | |
|--------------------------------|------------|------------|------------|-------------|
| <input type="text" value="1"/> | ① before | ② into | ③ with | ④ from |
| <input type="text" value="2"/> | ① without | ② for | ③ by | ④ above |
| <input type="text" value="3"/> | ① thus | ② upstairs | ③ hence | ④ otherwise |
| <input type="text" value="4"/> | ① survival | ② arrival | ③ interval | ④ festival |
| <input type="text" value="5"/> | ① meet | ② deny | ③ approve | ④ insist |

問B. 6.～15. の各文が本文の内容に合っていれば解答欄の①にマークし、合っていないければ解答欄の②にマークせよ。

6. Chimpanzees often use sticks as a weapon to fight off rivals trying to invade their territories.
7. Dolphins make use of sponges lest they should hurt their beaks while searching for food.
8. The avoidance of biting hard-shelled prey through the tool use helps sea otters reduce their tooth damage.
9. Once in a while sea otters use the outsides of boats as well as objects like rocks when they try to break open hard-shelled prey.
10. It is not rare that the hardness of a certain larger prey's shells makes sea otters give up enjoying the soft delicious parts inside.
11. According to the article, not all sea otters use tools when they are feeding.
12. There is one researcher who thinks it quite significant for female otters to utilize tools in that they need the calories.
13. According to the recent study, the female otters' daily intake of calories decreases when they are pregnant.
14. Some of the sea otters in California manage to survive because of their tool use, even after they have lost their teeth.
15. It is feared that sea otters might suffer from health damage caused by the harmful substances contained in the plastic bottles they use as tools.

II. 次の1.～5.の日本語の意味の英文を、書き出しの語句に続けて下にある語句を並べかえて作るとした場合、に入れるべきものはどれか。解答欄にマークせよ。

1. 明日釣りに行くかどうかは天候次第だ。

It depends fishing tomorrow.
① of the weather ② on ③ we ④ the state ⑤ will go ⑥ whether

2. 少子化は日本が直面する深刻な問題の一つだ。

The declining in Japan.
① of the serious problems ② we're ③ is ④ facing ⑤ one ⑥ birth rate

3. 熊谷の暑さにはすぐになれると思うよ。

I'm in no time.
① the heat of Kumagaya ② sure ③ you'll ④ to ⑤ used ⑥ get

4. 高波のためフェリーは欠航となった。

The ferryboat the high waves.
① account ② canceled ③ of ④ on ⑤ was ⑥ service

5. その割烹料理店は烏丸御池駅から歩いて5分とかからない。

The Japanese-style restaurant Karasuma Oike Station.
① 5 minutes' ② from ③ within ④ located ⑤ is ⑥ walk

III. 次の1.～5.の英文の意味が通じるためには、の中にどのような語を入れたらよいか。下の語群から選び、解答欄にマークせよ。

1. The boys were up some mischief.

2. We believe that our mayor has nothing to do the bribery scandal.

3. This kimono looks great you.

4. SNS stands social networking service.

5. I hope that she will get better long.

[語群：① for ② on ③ before ④ with ⑤ by ⑥ to]

IV. 1. ～ 5. の英文の説明に該当する英単語を下の語群〔①～⑩〕から選び、解答欄にマークせよ。

1. a type of bed used for carrying someone who is too injured or ill to walk

= 31

2. a special occasion when people celebrate something such as a religious event, and there is often a public holiday

= 32

3. something difficult or worrying that you are responsible for

= 33

4. a medical condition in which you become ill or in which your skin becomes red and painful because you have eaten or touched a particular substance

= 34

5. a small low wave on the surface of a liquid

= 35

[語群 : ① stress ② riot ③ stretcher ④ ripple
 ⑤ firework ⑥ allergy ⑦ festival ⑧ bureau
 ⑨ agony ⑩ burden]

V. 36. ～ 40. の英単語の一番強く発音する箇所はどこか。解答欄にマークせよ。

36. con · sti · tute
 ① ② ③

37. for · ev · er
 ① ② ③

38. au · to · mat · ic
 ① ② ③ ④

39. com · plex · i · ty
 ① ② ③ ④

40. sen · si · bil · i · ty
 ① ② ③ ④ ⑤