

## 令和5年度入学試験問題

### 外国語(英語)

コミュニケーション英語Ⅰ，コミュニケーション英語Ⅱ，  
コミュニケーション英語Ⅲ，英語表現Ⅰ，英語表現Ⅱ

(4問)

令和5年2月25日

自15時20分

至17時20分

#### 答案作成上の注意

- 1 この問題冊子には、コミュニケーション英語Ⅰ，コミュニケーション英語Ⅱ，コミュニケーション英語Ⅲ，英語表現Ⅰ，英語表現Ⅱの問題があります。総ページは11ページです。
- 2 解答用紙は2枚(計3ページ)です。解答はすべてその解答用紙に読みやすい文字で記入しなさい。
- 3 受験番号は、解答用紙の所定の箇所に、必ず記入しなさい。
- 4 解答用紙の大問ごとにある「得点欄」には何も記入してはいけません。
- 5 配付した解答用紙は、持ち出してはいけません。
- 6 試験終了後、問題冊子は持ち帰ってください。
- 7 この問題冊子の裏表紙には、試験時間中に机の上に置いてよいものを記載しています。

試験時間中に机の上に置いてよいもの

- 本学受験票
- 大学入学共通テスト受験票
- 配付した問題冊子等
- 黒鉛筆(和歌, 格言等が印刷されているものは不可)
- 鉛筆キャップ
- シャープペンシル
- 消しゴム
- 鉛筆削り(電動式, 大型のもの, ナイフ類は不可)
- 時計(辞書, 電卓, 端末等の機能があるものや, それらの機能の有無が判別しにくいもの, 秒針音のするもの, キッチンタイマー, 大型のものは不可)
- 眼鏡
- ハンカチ
- 目薬
- ティッシュペーパー(袋又は箱から中身だけ取り出したもの)

[ I ] Read the following passage and grasp the main ideas. Then, summarize each paragraph within 60 characters (including punctuation marks) in Japanese.

Alexander Bardi-Spröwitz has seen more dissected ostriches<sup>(注 1)</sup> than the average engineer. Twelve years ago he was attempting to design a legged robot based on bird biology. The trouble was that most biologists do not describe animal anatomy<sup>(注 2)</sup> in engineering-friendly terms. “It’s not their goal to build a robot,” Bardi-Spröwitz notes. Then he met a veterinary<sup>(注 3)</sup> scientist, Monica Daley. “That got me thinking about how we use our understanding of motion and animals to develop robots that can move more quickly,” Daley says. Now this combination of veterinary experience and hard robotics<sup>(注 4)</sup> has been rewarded. The two researchers, along with members of Bardi-Spröwitz’s lab, have created a bipedal<sup>(注 5)</sup> machine, BirdBot<sup>(注 6)</sup>.

For roboticists, birds make a particularly interesting point of study because they, like humans, walk upright on two legs. “Given that there are around 10,000 living species of bird and only one species of human, birds have a lot to offer us in understanding how bipedalism can work,” says a biomechanics researcher, Peter Bishop, who was not involved in BirdBot’s creation. This kind of information is vital for those who want to reproduce bipedal motion.

To keep BirdBot upright while moving, the team invented a system capable of rapidly switching between an extended and bended leg position. Like humans, birds have muscles and tendons<sup>(注 7)</sup> that stretch over multiple joints, forming a structure that can automatically move the connected bones in certain ways. But unlike human legs, which have at most two joints connected this way, a bird leg’s muscles and tendons can bridge up to five joints. BirdBot uses a five-joint network that mimics the leg motion of a flightless bird, such as an ostrich, as it runs in the wild. This setup offers an advantage by allowing the bird’s leg to move faster than its nervous system can operate. Though nerve impulses might seem fast, they take some time to travel from brain to muscle. But with a five-jointed muscle network, a bird does not have to signal each muscle independently. It simply moves one, and the whole system works.

Bishop says the project is “awesome science at its best.” But he sees room for improvement in future BirdBot designs. For example, the current version of the robot is only able to move forward and backward but not sideways. “All the leg joints are so simply structured that the robot is more like ‘2.5-D,’” he says (as opposed to fully three-dimensional).

Bardi-Spröwitz hopes to address this limitation in later improvements. Ideally, he envisions BirdBot lending humans a hand (or foot) in forestry<sup>(注8)</sup> and sustainable agricultural practices. Some farms already employ autonomous tractors to help cultivate fields and spray crops, but these wheeled bots are all but useless on uneven or densely wooded land. “Legged robots can overcome those obstacles where wheeled robots are currently blocked,” Bardi-Spröwitz says. This would allow them to weed complex farms, for example, or to go deep into forests to monitor downed trees.

(Adapted from an article by Joanna Thompson in *Scientific American*, April 6, 2022)

(注1) dissected ostriches 解剖されたダチョウ

(注2) anatomy 生体構造

(注3) veterinary 獣医学の

(注4) robotics ロボット工学

(注5) bipedal 二足歩行の

(注6) BirdBot バードボット

(注7) tendons 腱

(注8) forestry 森林管理

〔Ⅱ〕 Read the following two passages about social cognitive theory and answer the questions.

資料 1

Social cognitive theory views people as active agents who can both influence and are influenced by their environment. The theory is an extension of social learning that includes the effects of cognitive processes—such as conceptions, judgment, and motivation—on an individual’s behavior and on the environment that influences them. By including thought processes in human psychology, social cognitive theory highlights the role of observational learning and imitation in human behavior.

Social cognitive theory can trace its origins to the famous psychology professor Albert Bandura and his colleagues; in particular, a series of well-known studies on observational learning known as the Bobo Doll<sup>(注 1)</sup> experiments. In one of these experiments, researchers exposed young, pre-school aged children to an adult model acting violently toward a large doll. This aggressive behavior included verbal insults and physical violence. Then, the children either witnessed the aggressor being rewarded, or punished for his behavior. After being exposed to this model, the children were placed in a room where they were given the same doll. The researchers found that the children displayed verbal and physical aggression toward the doll, and that boys were more likely to be aggressive than girls. They also found that those who had watched the model receive a reward for attacking the doll were more likely to show aggressive behavior toward the doll.

Bandura’s ideas about observational learning were in stark contrast to previous behaviorists, such as B.F. Skinner. According to Skinner, learning can only be achieved through individual action.<sup>(A)</sup> However, Bandura claimed that people and animals can also learn through watching and imitating the models they encounter in their environment, enabling them to acquire information more quickly.

Not all observed behaviors are learned effectively. There are several factors involving both the model and the observer that determine whether or not a behavior is

learned. These include ( a ), ( b ), ( c ), and ( d ).

Imitation is more likely to occur if we identify with the model; we see them as sharing some characteristics with us, that is, similar age, gender, social status as we identify with them.

Learning would be both laborious and hazardous in a world that relied exclusively on direct experience. Social modeling provides a way for people to observe the successes and failures of others with little or no risk. This modeling can take place on a massive scale through media. In other words, media is a means by which people can learn new behaviors, because it provides a reference point for observers to imitate. When used effectively, media can prompt individuals to adopt certain behaviors or ways of thinking that they may not have otherwise engaged in.

(Adapted from an article by Charlotte Nickerson, May 5, 2022)

(注1) Bobo Doll 風船のようにふくらませた大きな人形

## 資料 2

Social cognitive theory is a learning theory developed by Albert Bandura. The theory provides a framework for understanding how people actively shape and are shaped by their environment. In particular, the theory details the processes of observational learning and modeling.

In the 1960s, Bandura, along with his colleagues, initiated a series of well-known studies on observational learning called the Bobo Doll experiments. In one of these experiments, pre-school children were exposed to an adult model acting violently toward a large doll. The gender of the model was varied, with some children observing same-sex models and some observing opposite-sex models. The model was verbally and physically aggressive toward the doll in the presence of the children. After exposure to the model, the children were taken to another room to play with the same doll. The researchers found that the children displayed verbal and physical aggression toward the doll. In addition, boys were more likely to be aggressive than girls, especially if they had been exposed to an aggressive male model.

A subsequent experiment utilized a similar method, but in this case a group was shown films of the aggressive model and another group was shown films of an aggressive cartoon character. As in the previous experiment, the children of both groups exhibited aggressive behavior.

These studies served as the basis for ideas about observational learning and modeling both in real-life and through the media. In particular, it spurred a debate over the ways media models can negatively influence children that continues today.

A major component of social cognitive theory is observational learning. Bandura's ideas about learning stood in contrast to those of behaviorists like B.F. Skinner. According to Skinner, learning could only be achieved by taking individual action.<sup>(B)</sup> However, Bandura claimed that observational learning, through which people observe and imitate models they encounter in their environment, enables people to acquire information much more quickly.

Observational learning occurs through a sequence of four processes:

1. ( a ) account for the information that is selected for observation in the environment. People might select to observe real-life models or models they encounter via media.

2. ( b ) involve remembering the observed information so it can be successfully recalled and reconstructed later. Imitation is not always immediate. These processes are often mediated by symbols. Symbols are anything that stands for something else: they can be words, pictures, or even gestures.

3. ( c ) reconstruct the memories of the observations so what was learned can be applied in appropriate situations. In many cases, this doesn't mean the observer will imitate the observed action exactly, but that they will modify the behavior to produce a variation that fits the context.

4. ( d ) determine whether or not an observed behavior is performed based on whether that behavior was observed to result in desired or adverse outcomes for the model. If an observed behavior was rewarded, the observer will be more encouraged to reproduce it later. However, if a behavior was punished in some way, the observer would not feel like reproducing it. Thus, social cognitive theory cautions that people don't perform every behavior they learn through modeling.

In addition to the information models can convey during observational learning, models can also increase or decrease the observer's belief in their ability to perform observed behaviors and bring about desired outcomes from those behaviors. When people see others like them succeed, they also believe they can be capable of succeeding. Thus, models are a source of motivation and inspiration.

The potential of media models has been demonstrated through dramas that were produced for developing people's awareness toward issues such as ecology, peace, and human rights. These dramas have been successful in bringing about positive social change, while demonstrating the relevance and applicability of social cognitive theory to media.

(Adapted from an article by Cynthia Vinney, January 20, 2019)



- 問 1 資料 1 の第 2 段落と資料 2 の第 2 段落は同じ実験 (the Bobo Doll experiments) を紹介していますが、資料 1 の第 2 段落のみに書かれている実験結果があります。それが何であるかを 60 字以内の日本語で書きなさい。句読点も字数に含めます。
- 問 2 資料 2 の第 2 段落のみに書かれている実験結果があります。それが何であるかを 50 字以内の日本語で書きなさい。句読点も字数に含めます。
- 問 3 問 2 の実験結果は、実験のどの部分から導き出されましたか。それが書かれている一文の最初の 3 単語を資料から抜き出さない。
- 問 4 問 2 の実験結果からどのような解釈が成り立ちますか。その解釈が書かれている一文を資料 1 から探し、その最初の 3 単語を抜き出さない。
- 問 5 資料 2 の第 3 段落では、subsequent experiment (その後の実験) にも触れられています。この subsequent experiment の結果を踏まえつつ、資料は「あるもの」の影響力の大きさを指摘しています。その「あるもの」を表す英語として、資料 1 と資料 2 の両方に含まれている 1 語を抜き出さない。
- 問 6 資料 1 と資料 2 の ( a ) ~ ( d ) を補うのにもっともふさわしい語句を下  
の①~④から選び、番号で答えなさい。
- ① Attentional Processes
  - ② Motivational Processes
  - ③ Retention Processes
  - ④ Production Processes
- 問 7 下線部 (A) や下線部 (B) の考えにもとづくと、学びはどのような特徴を持ちうると資料には書かれていますか。それが書かれている一文の最初の 3 単語を抜き出さない。

問 8 下線部 (1) の具体例が資料 2 に書かれています。その具体例を 40 字以内の日本語で書きなさい。句読点も字数に含めます。

問 9 資料 1 と資料 2 に同じタイトルを付けるとしたら何が良いですか。もっともふさわしいものを下の①～④から選び、番号で答えなさい。

- ① Bobo Doll's influence on children
- ② Learning from the behavior of others
- ③ Media's impact on our life
- ④ Remembering the observed information

[ III ] Concerning the underlined part in the following conversation, write your own opinion in about 100 English words. Write the number of words that you used in the bracket at the top. (Don't include punctuation marks in your word count.)

**Yu and Aki are talking about online services.**

Yu: Online services like smartphone payment, real time information, video meetings are very useful.

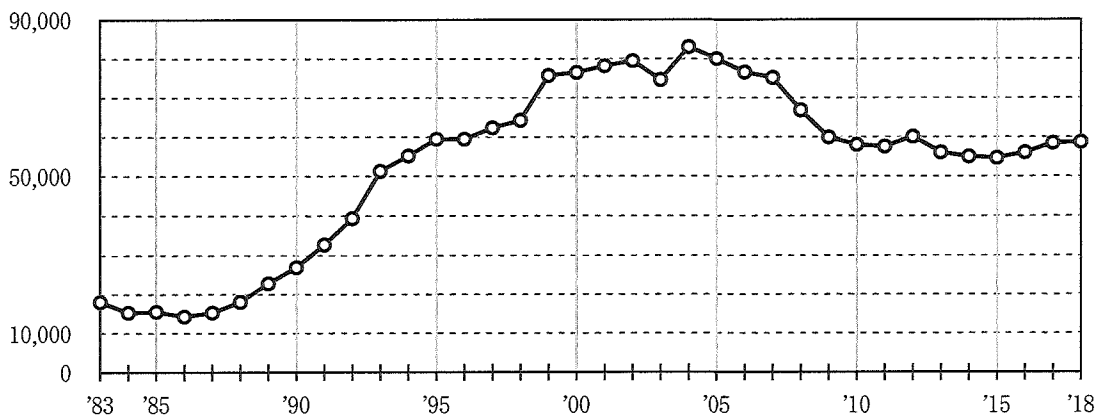
Aki: I agree. But some people like the elderly don't have smartphones or computers. Or even if they do, they might have difficulty using such online services.

Yu: Yeah, but we can't go back to the pre-computer age. We'll have to think about the ways online services can be made available to us all.

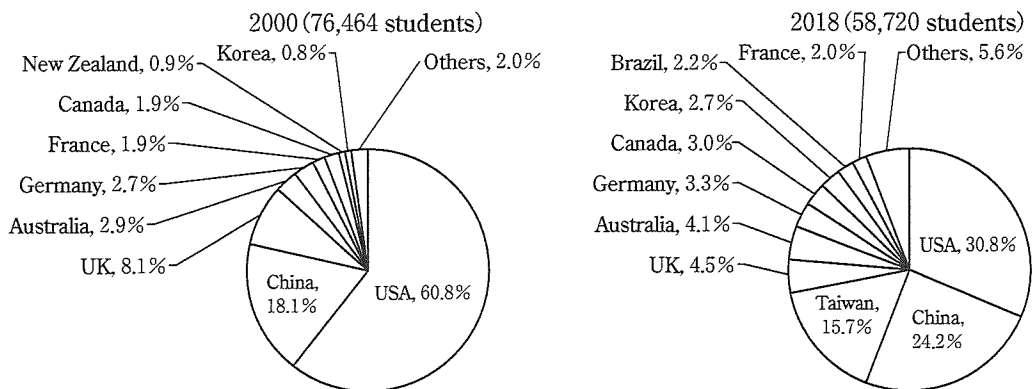
[IV] Describe and analyze the trends that the following graphs show in a report of about 100 English words. Write the number of words that you used in the bracket at the top. (Don't include punctuation marks in your word count.)

Graph (1) shows the numbers of Japanese students studying abroad from 1983 to 2018, and Graph (2) shows the main destinations where they studied in 2000 and 2018.

Graph (1): Numbers of Japanese students studying abroad



Graph (2): Main destinations



(These graphs are based on a white paper by the Cabinet Office of Japan.)







