2024 年度入学試験問題　　　**216**

法学部Ａ方式Ⅱ日程・国際文化学部Ａ方式
キャリアデザイン学部Ａ方式

# 1　限　**英　　　語**　（90分）

〈注意事項〉

1. 試験開始の合図があるまで，問題冊子を開かないこと。

2. 解答はすべて解答用紙に記入しなさい。

3. マークシート解答方法については以下の注意事項を読みなさい。

---

## マークシート解答方法についての注意

　マークシート解答では，鉛筆でマークしたものを機械が直接読みとって採点する。したがって解答は
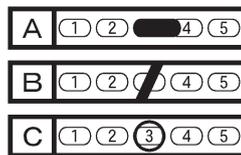HB の黒鉛筆でマークすること(万年筆，ボールペン，シャープペンシルなどを使用しないこと)。

### 記入上の注意

1. 記入例　　　　　解答を **3** にマークする場合。

(1)　正しいマークの例　　　　(2)　悪いマークの例

A ① ② ● ④ ⑤　　　　A ① ② ● ④ ⑤ ⎫
　　　　　　　　　　　　B ① ② ／ ④ ⑤ ⎬ 枠外にはみださないこと。
　　　　　　　　　　　　　　　　　　　　⎭
　　　　　　　　　　　　C ① ② ③ ④ ⑤　　○でかこまないこと。

2. 解答を訂正する場合は，消しゴムでよく消してから，あらためてマークすること。
3. 解答用紙をよごしたり，折りまげたりしないこと。
4. 問題に指定された数よりも多くマークしないこと。

---

4. 問題冊子のページを切り離さないこと。

— 1 —

〔Ⅰ〕　つぎの英文を読んで，問いに答えよ。

　　In 1957 B.F. Skinner, a well-known scientist of animal behavior, published a book called *Verbal Behavior* in which he outlined his views on how language is acquired. He based his theory on his studies of how animals learn. For example, he described how rats in a cage learned to press a bar when a light flashed in order to obtain food. Central to his account of how animals learn are the three processes of stimulus, response and reward (or reinforcement). In the case of the rats, these three processes worked as ┌─(ア)─┐ . The rats received a stimulus in the form of a flashing light and learned ┌─(イ)─┐ the correct response by pressing a bar they would receive a reward in the form of food. If the rats gave an incorrect response then they were not rewarded.

　　You may wonder <u>what rats doing clever things in cages has to do with children learning to talk</u>, but in *Verbal Behavior* Skinner applied behaviorist
(ウ)
theories of learning in general to the specific context of learning language. According to Skinner, learning language is no different, in essence, from any other form of learning and we learn through the same mechanisms that control animal learning. For example, the parent stimulates the child by playing and talking to her. The child responds by imitating and repeating the parent's language. If the child imitates and repeats correctly her response is rewarded and reinforced through, for example, praise, smiles or saying something like "Yes, that's a dog!" However, if the child's response is incorrect or inappropriate it is not reinforced; it is ignored or corrected. So correct responses are reinforced. Incorrect responses are not reinforced. Children gradually learn to talk, therefore, by listening, ┌─(エ)─┐ and ┌─(オ)─┐ correctly the language they hear.

　　<u>This explanation must be right, up to a point.</u> Obviously children *do*
(カ)
listen and they *do* copy what they hear. Anyone who has listened to young

children talking knows that <u>this is the case</u>.　An example that supports the

(キ)

behaviorist explanation of language learning based on reinforcement of correct responses comes from Daniel, aged fifteen months.　He would raise his arms towards an adult whenever he wanted to be picked up and say "Get down!"　(ク)This apparently ①<u>contradictory</u> request and gesture can be explained by the fact that ②<u>as</u> a very active young child he ③<u>frequent</u> heard his mother saying to him, "Daniel, get down!" when he was climbing on the furniture and in potential ④<u>danger</u> of hurting himself.　He had heard the phrase on many occasions but had not yet learned that "down" indicates only one direction.　He had interpreted it as meaning movement in either direction, up or down.　(ケ)The ①<u>significance</u> of this example is that all the adults who knew Daniel very ②<u>well</u> thought that this was highly ③<u>amused</u> and actually reinforced his ④<u>inaccurate</u> request by picking him up!　So this example supports a behaviorist explanation: that the child copies the adult and is rewarded when he copies a phrase correctly even, in this instance, when he has interpreted it incorrectly.　After hearing more examples of the phrase, in context, he had learned the distinction between "up" and "down" by the age of eighteen months.

　So anyone who has ever listened to children talking knows that they copy words and phrases they hear.　Therefore the behaviorist view of language acquisition, with its emphasis on the role played by nurturing adults, must be valid.　However, anyone who has ever listened to children talking also knows that they say grammatically incorrect things like "I rided my bike," "I hurted my foots" and "I catched the ball."　You can immediately see that a theory based on the idea that children learn language simply by listening to and imitating adult speech must have great ┌(コ)┐ in explaining examples of children's language such as these. Whoever heard an adult say "I hurted my foots!"?　A linguist who was to have a profound influence on our understanding of language, Noam

Chomsky, tackled this phenomenon of children saying original things they can never have heard adults say.   In 1959 he wrote a highly critical review of Skinner's *Verbal Behavior* in which he effectively defeated a view of language learning based on the behavior of rats in cages.   Not only did he believe that rats were irrelevant to the study of language learning, but he also claimed that Skinner misunderstood the nature of language.

1．空所 ┃　(ア)　┃ に入る最も適切なものを，つぎの a ～ d から一つ選び，その記号を解答欄にマークせよ。

　　a．following　　　b．follows　　　c．is followed　　　d．to follow

2．空所 ┃　(イ)　┃ に入るようにつぎの a ～ d を並べ替え，2番目と4番目に来る記号を解答欄にマークせよ。ただし，同じ選択肢は一度しか使用できない。

　　a．gave　　　　　b．if　　　　　　c．that　　　　　　d．they

3．下線部(ウ) <u>what rats doing clever things in cages has to do with children learning to talk</u> の内容に最も近いものを，つぎの a ～ d から一つ選び，その記号を解答欄にマークせよ。

　　a．how clever children, when put in cages, learn to talk to rats

　　b．how quickly children learn to talk by watching rats doing clever things in cages

　　c．how rats in cages cleverly respond to children talking to them about what to do

　　d．how relevant rats doing clever things in cages is to children learning to talk

4．空所 ⎡(エ)⎤ と ⎡(オ)⎤ に入る語の組み合わせとして最も適切なものを，つぎの a ～ d から一つ選び，その記号を解答欄にマークせよ。

    a．(エ) imitate     (オ) repeat

    b．(エ) imitating     (オ) repeat

    c．(エ) imitate     (オ) repeating

    d．(エ) imitating     (オ) repeating


5．下線部(カ)This explanation must be right, up to a point. の内容に最も近いものを，つぎの a ～ d から一つ選び，その記号を解答欄にマークせよ。

    a．This explains which point should be emphasized.

    b．This gives us a complete picture of what is happening.

    c．This illustrates what is going on to a certain extent.

    d．This is precisely the point we are not sure of.


6．下線部(キ)this is the case の意味に最も近いものを，つぎの a ～ d から一つ選び，その記号を解答欄にマークせよ。

    a．this is absurd         b．this is mysterious

    c．this is problematical     d．this is true


7．(ク)の文の 4 つの下線部①～④には 1 か所文法的誤りがある。その記号を解答欄にマークせよ。

(ク)This apparently ①contradictory request and gesture can be explained by the fact that ②as a very active young child he ③frequent heard his mother saying to him, "Daniel, get down!" when he was climbing on the furniture and in potential ④danger of hurting himself.

8．㋘の文の４つの下線部①〜④には１か所文法的誤りがある。その記号を解答欄にマークせよ。

㋘The ①significance of this example is that all the adults who knew Daniel very ②well thought that this was highly ③amused and actually reinforced his ④inaccurate request by picking him up!

9．空所 ⎡ ㋙ ⎤ に入る最も適切なものを，つぎのａ〜ｄから一つ選び，その記号を解答欄にマークせよ。

　ａ．difficulty　　　ｂ．distance　　　ｃ．merit　　　ｄ．opportunity

10．本文の内容と合致するものを，つぎのａ〜ｄから一つ選び，その記号を解答欄にマークせよ。

　ａ．As a scientist of animal behavior, Skinner insisted that the mechanism of language learning could be applied to animal learning.

　ｂ．According to Skinner, you can reinforce the child's correct use of language not only with verbal expressions but also with facial expressions.

　ｃ．Children sometimes pick up awkward sentences because their parents speak ungrammatically in their presence.

　ｄ．Chomsky recommended Skinner's book two years after its publication by paying attention to his effective arguments on language learning.

〔Ⅱ〕 Read the passage and answer the questions that follow.

French philosopher Henri Lefebvre once wrote, "There is nothing, in history, or in society, which does not have to be achieved and produced." People are actors in creating their own environments, and art is intimately connected to how humans and their social establishments are linked. In "Cities Within the City," Kurt Iveson states that while we create our environment, the way we do so is complicated by differences in power between contributors. For Lefebvre, it is important to know who produces, what they produce, how, why, and for whom. Only then can one understand urban space, its creators, intentions, and consumers. Yet there is no explicit text that states the contributions, especially of the    (X)    powerful. That is where street art comes in. "Street art" is usually defined as a type of visual expression that conveys meaning through different media such as murals*1, posters, and installations. It is primarily an urban phenomenon and has strong ties to the hip-hop culture of the late 1970s and 1980s. It is    (A)    the tradition of graffiti*2, but street art and graffiti are not exactly the same. According to Cedar Lewisohn, graffiti's origins were less political than street arts'. Graffiti wasn't "so much about connecting with common people ... it's an internal language, it's a secret language." It was often viewed negatively as an illegal nuisance*3. But as it evolved during the protest movements of the 1970s, graffiti gained some recognition for its artistic creativity and its ability to spread political and social messages.

The street art movement evolved out of this social context and is perhaps best understood as an expression of lost voices and of resistance. According to Carmen Cowick: "Street art has the ability to provide a historical narrative to disenfranchised*4 or marginalized*5 voices. When the historical narrative is created by those in power due to media control,

the people sometimes take to the streets to create their own narrative in order to level the playing field." Street art often calls audiences and (ii) viewers to action, encouraging them to fight for social equality, political action, and justice.

This connection to social purpose is part of why street artists are often recognized as artists, unlike graffiti "writers." Street artists must spend a considerable amount of time preparing pieces [ (B) ] , whereas graffiti artists need not prepare anything before painting a wall. According to Lewisohn, street artists may be seen as part of the "fine arts" community. Banksy is perhaps the best-known example of a socially engaged street artist, with Shepard Fairey — creator of President Barack Obama's iconic 2008 campaign poster — a close second. Street art pieces, such as those created by Banksy, tend to be site- and content-specific. [ (C) ] , graffiti art's content is not location-driven and can feel ubiquitous[*6], rather than specific. In practice, these distinctions can be less clear, especially as cities vary in how they define, permit, and engage with these different types of art and artists and as communities feel empowered to create their stories.

While graffiti differs from street art as a less formal and more personal public art form, the commissioned public monument is a more formal and officially approved art form. Baltimore was known as "The Monumental City" during the late nineteenth century due to the many bronze statues and memorials that decorated its parks and squares. Many of these monuments depict past events and people in a way that systematically erases, damages, or excludes disenfranchised and marginalized groups or politically and socially disturbing events. They produce a story, a legacy, (iii) and a landscape, as many scholars have discussed, that does not represent the city's current residents and may even harm them. As Adrienne Burk points out, a disturbing aspect of this art form is that memory is both "organized forgetting as well as organized remembering." Derek Alderman

reinforces this notion when he points out that "what is commemorated is not the same as all that has gone on in the past; what is defined as memorable or historically significant is ⬚(D)⬚ social control." Whose conception of the past and what is suitable to be commemorated is, in large part, a political process where those in power control the outcome.

(Adapted from Meredith K. Stone and Geoffrey L. Buckley, "Street Art in Baltimore: A Catalyst for Change," *Focus on Geography*, vol. 62, 11 May 2019)

*[1] murals：壁画

*[2] graffiti：スプレーなどを用いて公共空間に描く絵や文字

*[3] nuisance：やっかいなもの

*[4] disenfranchised：市民権を奪われた

*[5] marginalized：主流から排斥された

*[6] ubiquitous：至るところにある

1．Choose the word that best fills the blank ⬚(X)⬚ , and mark the letter on your answer sheet.

　ａ．all　　　　　ｂ．less　　　　　ｃ．more　　　　　ｄ．most

2．Choose the phrase that best fills the blanks ☐(A)☐ to ☐(D)☐ , and mark the letter on your answer sheet.

| ☐(A)☐ | a．divided into | b．inconsistent with |
| | c．rooted in | d．short of |
| ☐(B)☐ | a．at random | b．in advance |
| | c．in vain | d．on behalf |
| ☐(C)☐ | a．By contrast | b．For example |
| | c．From now on | d．In addition |
| ☐(D)☐ | a．fond of | b．independent of |
| | c．open to | d．superior to |

3．Choose the statement that is closest in meaning to it is important to (i) know who produces, what they produce, how, why, and for whom, and mark the letter on your answer sheet.

a．a special knowledge of city planning helps us properly assess the essential value of urban art and its impact on cities

b．it is necessary for us to meet regularly with artists who contribute to the quality of urban life to improve the designs of our cities

c．we need to access information about contributors, their purposes, reasons, methods, and outcomes in our urban environment

d．urban space should be categorized into certain districts which would be assigned to residents according to social classes and ethnic groups

4．Choose the phrase that is closest in meaning to level the playing field, (ii) and mark the letter on your answer sheet.

a．clean the playground for children to move around freely

b．gain a space for more equal opportunity of expression

c．build heritage structures to celebrate legendary artists

d．use streets and squares to hold outdoor drama festivals

5. Choose the phrase that is closest in meaning to <u>They</u>, and mark the
   (iii)
   letter on your answer sheet.

   a. Current residents              b. Parks and squares

   c. Past events                    d. Public monuments


6. Choose the best place in the passage to insert the following statement,
   and mark the letter on your answer sheet.

   In Baltimore, street art challenges our conception of what is
   "memorable" or "historically significant" and gives residents the chance
   to tell a story that has been purposefully forgotten or otherwise erased
   from historical consciousness.

   a. at the end of the first paragraph

   b. at the end of the second paragraph

   c. at the end of the third paragraph

   d. at the end of the last paragraph


7. For the following statements (I) and (II), choose the correct answer from
   a - d, and mark the letter on your answer sheet.

  (I)  Street artists are recognized as artists because they simply focus on
   the act of creation and what they produce has nothing to do with
   social equality.

 (II)  While graffiti is derived from the hip-hop culture in the late 1970s
   and 1980s, the origin of street art is in the Baltimore "fine arts"
   community.

   a. Both (I) and (II) are true according to the passage.

   b. Only (I) is true according to the passage.

   c. Only (II) is true according to the passage.

   d. Neither (I) nor (II) is true according to the passage.

8．For the following statements (I) and (II), choose the correct answer from a - d, and mark the letter on your answer sheet.

(I)  Universally recognized street artists such as Banksy would not be concerned with the location of their artworks.

(II)  Street art can provide a historical narrative by representing the voices of marginalized groups to resist those who control their environments.

  a．Both (I) and (II) are true according to the passage.

  b．Only (I) is true according to the passage.

  c．Only (II) is true according to the passage.

  d．Neither (I) nor (II) is true according to the passage.


9．For the following statements (I) and (II), choose the correct answer from a - d, and mark the letter on your answer sheet.

(I)  In Baltimore as "The Monumental City," graffiti have functioned as a good means of commemorating significant events for the residents.

(II)  Events that are historically significant are not always portrayed as they actually happened because those in power interfere with what and how people remember these events.

  a．Both (I) and (II) are true according to the passage.

  b．Only (I) is true according to the passage.

  c．Only (II) is true according to the passage.

  d．Neither (I) nor (II) is true according to the passage.

〔Ⅲ〕 Read the passage and answer the questions that follow.

Men who were elected to public office in the Roman government or served in the Roman Senate during the latter days of the Roman Republic had usually been Italians, but Julius Caesar in the 40s B.C. experimented with widening the recruiting pool of Rome's leaders in the early years of the Roman Empire. Claudius, who reigned between A.D. 41 and 54 was the first emperor to have been born outside Italy, approved a standing policy that the Senate should include men of talent from colonies and cities everywhere.

In practice the early emperors did comparatively little to bring this about, but in the second half of the century the position changed markedly and a number of Rome's citizens from Roman provinces outside of Italy attained high positions. In A.D. 56 the first Greek was appointed to the important post of governor of Egypt: this was Tiberius Claudius Balbillus, who wrote a book about his journeys around the province he governed. By A.D. 76 the composition of the Roman Senate was looking more representative of the empire as a whole. It has been estimated that perhaps 17 percent of its six hundred members came from outside Italy. Men from the thoroughly Romanized provinces of southern France and southern Spain were recruited. Most of these were ultimately of Italian origin, but for the first time two Greek senators were elected.

Just below the senatorial class were the knights. In Rome's early days, the knights had been wealthy citizens who served in the army as cavalry, soldiers who fought on horseback, but later the term embraced businessmen and country gentlemen. The minimum entry qualification to become a knight was property or capital worth 400,000 sesterces* (less than half the 1 million sesterces required to become a senator). Companies of knights collected taxes on behalf of the Roman Empire, although city governments

in the provinces were beginning to take over this task from them.   The loss
(C)
was compensated by gains in other imperial positions.   From the time of
Emperor Augustus, emperors had appointed freedmen, former slaves who
had been freed, to run the expanding imperial administration.   These men
did not have political supporters on which they could call and so had no
choice but to be totally loyal to their employers,   (X)   .   Perhaps for
this reason, but also because they made large fortunes that they tended to
spend on luxurious houses and lifestyles, imperial freedmen employed as
administrators became dangerously unpopular.   Eventually, emperors
replaced them with knights; they, too, carried little or no political weight,
but, unlike freedmen, had the advantage of being accepted and respected
members of Roman society.

Meanwhile city leaders throughout the empire were rewarded for their
willingness to take part in public life with the grant of Roman citizenship.
The Romans had a long tradition that can be traced back to their early
history when they were conquering their neighbors, local tribes in central
Italy.   They recruited their victims, inviting conquered people to join the
winning side.   Rome awarded some of them full citizenship with privileges
and others the lesser Latin Rights.

Once the lands encircling the Mediterranean Sea were in Roman hands,
the same principle was applied.   More and more men from the provinces
without a single Italian gene became citizens.   This made the empire a
(D)
shared enterprise in the success of which those who might otherwise have
opposed an occupying power had a common interest.   The custom was that
a man took on the Latin name of the distinguished Roman who had granted
him citizenship.   For example, a Corinthian from Greece could add Gaius
Julius to his Greek name, implying his Roman citizenship came from Julius
Caesar or his son Augustus.   Gaius Julius Severus was such a man, a
proud descendant of Greek kings in the Middle East who went on to become

a senior Roman official and governor in mainland Greece. <u>Nothing is more</u>
<sub>(E)</sub>
<u>expressive of someone's personal identity than how he or she is called</u>, and
the fact that throughout the empire everyone of any importance had a Latin
name was a vivid assertion of Rome's unifying authority.

(Adapted from Anthony Everitt, *Hadrian and the Triumph of Rome*, Random House,
2009)

\*sesterces : Roman coins and monetary unit

1. Choose the phrase that is closest in meaning to <u>to bring this about</u>, and
<sub>(A)</sub>
   mark the letter on your answer sheet.
   a. to allow more non-Italians into government
   b. to approve the standing policy
   c. to reign in Claudius' position
   d. to mark the second half of the century

2. Choose the phrase that is closest in meaning to <u>the composition of the</u>
<sub>(B)</sub>
   <u>Roman Senate</u>, and mark the letter on your answer sheet.
   a. the oral and written work of every Roman senator
   b. Rome's love of senators' songs and their performances
   c. the outlook of Rome's senators on written language
   d. the ethnic and regional background of Roman senators

3．Choose the phrase that is closest in meaning to <u>this task</u>, and mark the
<sub>(C)</sub>
letter on your answer sheet.

   ａ．serving in the cavalry

   ｂ．appointing former slaves

   ｃ．embracing businessmen

   ｄ．collecting taxes

4．Choose the phrase that best fills the blank ┃   (X)   ┃, and mark the
letter on your answer sheet.

   ａ．the freedmen             ｂ．the cavalry

   ｃ．the emperors          ｄ．the knights

5．Choose the phrase that is closest in meaning to <u>without a single Italian</u>
<sub>(D)</sub>
<u>gene</u>, and mark the letter on your answer sheet.

   ａ．lacking knowledge of Italian history

   ｂ．having no Italian ancestry at all

   ｃ．not owning enough Italian clothes

   ｄ．showing insufficient Italian skills

6．Choose the phrase that is closest in meaning to <u>Nothing is more</u>
<sub>(E)</sub>
<u>expressive of someone's personal identity than how he or she is called</u>,
and mark the letter on your answer sheet.

   ａ．One's identity is nothing without the ability to express himself or
herself

   ｂ．How someone talks to others shows the most about his or her identity

   ｃ．A person's name is most related to where he or she calls home

   ｄ．A person's name greatly influences his or her self-perception

7. For the following statements (I) and (II), choose the correct answer from
   a - d, and mark the letter on your answer sheet.
   (I)　The Roman Senate was very diverse during the late Roman Republic.
   (II)　Roman Emperors avoided using freed slaves in government because
   they were disloyal.
   　　a．Both (I) and (II) are true according to the passage.
   　　b．Only (I) is true according to the passage.
   　　c．Only (II) is true according to the passage.
   　　d．Neither (I) nor (II) is true according to the passage.


8. For the following statements (I) and (II), choose the correct answer from
   a - d, and mark the letter on your answer sheet.
   (I)　Having a Latin name was a symbolic part of becoming a Roman
   citizen.
   (II)　During its early years, Rome seldom fought wars with its Italian
   neighbors.
   　　a．Both (I) and (II) are true according to the passage.
   　　b．Only (I) is true according to the passage.
   　　c．Only (II) is true according to the passage.
   　　d．Neither (I) nor (II) is true according to the passage.

9. For the following statements (I) and (II), choose the correct answer from a - d, and mark the letter on your answer sheet.

(I) The custom of people outside of Italy adopting another person's Latin name showed their relationship, not the general popularity of the name.

(II) Freedmen who became wealthy working for the Roman imperial administration became famous and well-liked for their service.

    a. Both (I) and (II) are true according to the passage.

    b. Only (I) is true according to the passage.

    c. Only (II) is true according to the passage.

    d. Neither (I) nor (II) is true according to the passage.

10. For the following statements (I) and (II), choose the correct answer from a - d, and mark the letter on your answer sheet.

(I) The knights were employed in imperial administration because they were important politically.

(II) City leaders were awarded Roman citizenship for serving in local governments under Rome.

    a. Both (I) and (II) are true according to the passage.

    b. Only (I) is true according to the passage.

    c. Only (II) is true according to the passage.

    d. Neither (I) nor (II) is true according to the passage.

〔Ⅳ〕 つぎの英文を読んで，問いに答えよ。

　　As governments drag their feet in responding to climate change, many
　　　　　(A)
concerned people are looking for actions they can take as individuals — and
eating less meat is an obvious place to start.　Livestock*1 today account for
about 14.5 percent of global greenhouse gas emissions, more than all the
world's cars and trucks combined.

　　Those numbers are intimidating already, but the situation could grow
worse: Our appetite for meat is increasing.　The United Nations forecasts
that the world will be eating 14 percent more of it by 2030, especially as
middle-income countries get wealthier.　That means more demand for
agricultural land for both livestock and feed crops, more deforestation and
more climate problems.　For people alarmed about climate change, giving
up meat altogether can seem like the only option.

　　But is it?　A growing body of research suggests that the world could, in
　　　　(B)
fact, raise a modest amount of beef, pork, chicken and other meat, so that
anyone who wants could eat a modest portion of meat a few times a week —
and do so sustainably.　Indeed, it turns out that a world with some animal
agriculture in it likely would have a smaller environmental impact than an
entirely vegan*2 world.　The problem is that hitting the environmental
　　　　　　　　　　　　　　　　　　　　　　　　(C)
sweet spot would require big changes in the way we raise livestock — and,
for most of us in the wealthy West, a diet with considerably less meat than
we eat today.

　　One big reason for meat's outsized environmental impact is that it's
　　[（ア）]　for people to eat plants directly than to feed them to livestock.
Chickens need almost 2 pounds of feed to produce each pound of weight gain,
pigs need 3 to 5 pounds, and cattle need 6 to 10 — and a lot of that weight
gain is bones, skin and guts, not meat.　As a result, about 40 percent of the
world's farmable land is now used to grow animal feed, with all the

attendant environmental costs related to factors such as deforestation, water use, fertilizer runoff, pesticides and fossil fuel use.

But it's not inevitable that livestock compete with people for crops. Ruminants — that is, animals that graze[*3] on grass and have multiple stomachs, like cattle, sheep and goats — can digest the cellulose[*4] in grass, straw and other fibrous plant material that humans can't eat, converting it into animal protein that we can. And two-thirds of the world's agricultural lands are grazing lands, many of which are too steep, dry or marginal to be suitable for crops. "That land cannot be used for any other food-growing purpose other than the use of ruminant livestock," says Frank Mitloehner, an animal scientist.

Of course, those grazing lands could return to natural forest or grassland vegetation, taking up atmospheric carbon in the process. This carbon-capturing regrowth could be a major contributor to global climate-mitigation[*5] strategies. But that's not necessarily incompatible with moderate levels of grazing. For example, some research suggests that replacing croplands with well-managed grazing lands in the southeastern US captures (イ) from the atmosphere.

Livestock can also use crop wastes such as the bran and germ left over when wheat is milled to white flour. That's a big reason why 20 percent of the US dairy herd is in California's Central Valley, where cows feed partly on wastes from fruits, nuts and other specialty crops. Even pigs and chickens, which can't digest cellulose, could be fed on other wastes such as fallen fruit, discarded food scraps and insects, which most people wouldn't eat.

The outcome is that a world entirely without meat would require about one-third more cropland — and therefore, more energy-intensive fertilizer, pesticides and tractor fuel — to feed everyone, says Hannah van Zanten, a sustainable food systems researcher. But only if we're talking about meat

raised the right way, in the right amounts.

　　Livestock also bring other benefits.　Meat provides balanced protein and other nutrients such as iron and vitamin B12 that are more difficult to get from a vegan diet, especially for poorer people who can't always afford a variety of fresh vegetables and other nutritious foods, says Matin Qaim, an agricultural economist.　Livestock, he notes, are the main source of wealth for many <u>otherwise poor people</u> in traditional livestock grazing cultures.
　　　　　　　　　(D)

　　Moreover, many of the world's natural grasslands have evolved in the presence of grazers, which play a key role in ecosystem function.　Where those native grazers no longer dominate, domestic livestock can fill the same role.　"<u>Grasslands are disturbance-dependent</u>," says Sasha Gennet, who
　　　　　(E)
heads the sustainable grazing lands program for the Nature Conservancy. "Most of these systems evolved and adapted with grazing animals and fire. They can benefit from good livestock management practices.　If you're doing it right, and you're doing it in the right places, you can have good outcomes for conservation."

　　For all these reasons, some experts say, the world is better off with some meat and dairy than it would be with none at all — though clearly, a sustainable livestock system would have to be much different, and smaller, than the one we have today.


(Adapted from Bob Holmes, "How Much Meat Should We Eat?," *Smithsonian Magazine*, 23 August 2022)


*1 livestock：家畜

*2 vegan：完全菜食主義の

*3 graze：牧草を食べる，放牧する

*4 cellulose：セルロース，繊維素

*5 mitigation：緩和，軽減

1．下線部(A) governments drag their feet in responding to climate change の内容に最も近いものを，つぎのａ〜ｄから一つ選び，その記号を解答欄にマークせよ。

  ａ．governments have decreased the speed of climate change

  ｂ．governments have sped up their response to climate change

  ｃ．governments are reluctant to tackle the problem of climate change

  ｄ．governments are eager to deal with the problem of climate change


2．下線部(B) is it? の内容に最も近いものを，つぎのａ〜ｄから一つ選び，その記号を解答欄にマークせよ。

  ａ．is eating meat causing health problems?

  ｂ．is climate change making livestock go extinct?

  ｃ．is climate change such a serious problem to worry about?

  ｄ．is eating no meat the best solution to stop climate change?


3．下線部(C) hitting the environmental sweet spot の内容に最も近いものを，つぎのａ〜ｄから一つ選び，その記号を解答欄にマークせよ。

  ａ．taking advantage of the environmental benefits

  ｂ．enjoying the beauty of the natural environment

  ｃ．getting to the most effective environmental solution

  ｄ．harvesting fruits in an environmentally friendly manner


4．空所 （ア） に入る最も適切なものを，つぎのａ〜ｄから一つ選び，その記号を解答欄にマークせよ。

  ａ．tastier                ｂ．healthier

  ｃ．more efficient        ｄ．more complicated

5．空所 ⬚ (イ) ⬚ に入る最も適切なものを，つぎの a 〜 d から一つ選び，その記号を解答欄にマークせよ。

   a．far less waste            b．far more waste

   c．far less carbon          d．far more carbon

6．下線部(D) otherwise poor people の内容に最も近いものを，つぎの a 〜 d から一つ選び，その記号を解答欄にマークせよ。

   a．people who are far from poor

   b．people who used to be wealthy but are not now

   c．people who would suffer from poverty if they couldn't raise livestock

   d．people who would earn their living by other means in order to avoid poverty

7．下線部(E) Grasslands are disturbance-dependent の内容に最も近いものを，つぎの a 〜 d から一つ選び，その記号を解答欄にマークせよ。

   a．Grasslands are easily invaded by livestock

   b．Grasslands cannot be preserved without grazing animals

   c．Native grazers in grasslands are vulnerable to climate change

   d．Native grazers in grasslands are likely to be driven away by non-native ones

8．つぎの(1)～(3)の英文①②について，正しいものをa～dからそれぞれ一つ
　　ずつ選び，その記号を解答欄にマークせよ。

(1)　①　Cars and trucks emit less than 14.5 percent of global greenhouse
　　　　　gas.

　　　②　It is estimated that the production of crops decreases as the
　　　　　consumption of meat grows.

　　　a．①は本文の内容に合致しているが，②は本文の内容に合致していない。

　　　b．①は本文の内容に合致していないが，②は本文の内容に合致している。

　　　c．①と②の両方が本文の内容に合致している。

　　　d．①と②の両方が本文の内容に合致していない。


(2)　①　It is possible to avoid conflicts over crops between people and
　　　　　livestock.

　　　②　Steep and arid lands are not suitable for ruminants to graze.

　　　a．①は本文の内容に合致しているが，②は本文の内容に合致していない。

　　　b．①は本文の内容に合致していないが，②は本文の内容に合致している。

　　　c．①と②の両方が本文の内容に合致している。

　　　d．①と②の両方が本文の内容に合致していない。


(3)　①　Pigs and chickens can digest cellulose and other waste products.

　　　②　It is fine to keep the same scale of animal agriculture as it is
　　　　　today because livestock cause less environmental problems than
　　　　　crops.

　　　a．①は本文の内容に合致しているが，②は本文の内容に合致していない。

　　　b．①は本文の内容に合致していないが，②は本文の内容に合致している。

　　　c．①と②の両方が本文の内容に合致している。

　　　d．①と②の両方が本文の内容に合致していない。