２０２０年度

慶應義塾大学入学試験問題

総合政策学部

外　国　語

注 意 事 項

1．　試験開始の合図があるまで、この問題冊子を開かないでください。

2．　この冊子は全部で24ページです。ドイツ語Ⅰ（選択）は２ページから５ページ、フランス語Ⅰ（選択）は６ページから９ページ、英語Ⅰ（選択）は10ページから12ページ、英語Ⅱが14ページから16ページ、英語Ⅲは18ページから22ページです。試験開始の合図とともにすべてのページが揃っているか、確認してください。ページの欠落・重複があった場合には、直ちに監督者に申し出てください。

3．　ドイツ語Ⅰ・フランス語Ⅰ・英語Ⅰのいずれかひとつの言語だけを選択し解答してください。選択した言語を解答用紙の選択問題マーク欄に必ずマークしてください。マークするのは、ひとつの言語だけです。英語Ⅱと英語Ⅲは全員が解答してください。

4．　問題冊子は、試験終了後必ず持ち帰ってください。

5．　受験番号と氏名は、解答用紙の所定の欄に必ず記入してください。

6．　解答用紙の「注意事項」を必ず読んでください。

英語 I（選択）

次の文章に関して、空欄補充問題と読解問題の二つがあります。まず、[31]から[40]の空所を埋めるのに、文脈的に最も適切な語を 1 から 3 の中から選び、その番号を解答欄（31）から（40）にマークしなさい。次に、内容に関する[41]から[45]の設問には、1 から 4 の選択肢が付されています。そのうち、文章の内容からみて最も適切なものを選び、その番号を解答欄（41）から（45）にマークしなさい。

1　　There can be few things as frustrating as being stuck in a car park for four hours on a scorching Sunday afternoon; yet this was the unhappy fate of shoppers at a new multi-story car park at an IKEA store in Reading, UK. As well as prompting a full-scale investigation by IKEA, such chaos invites us to consider how further [31](1. standoff　2. gridlock　3. clearance) can be prevented. Fortunately, mathematics can provide some basic guiding principles as we consider how to design the perfect car park.

2　　First, we need to decide how many parking spaces there should be. This is a perennial problem, [32](1. to　2. by　3. from) which there is no prescriptive answer. Too many spaces are costly and look ugly, while too few parking bays result in distraught and dissatisfied customers. Yet some relatively simple math can help us avoid the worst congestion.

3　　Suppose that daily peak demand averages M cars. We can get a sense of how much the number of cars is likely to vary from the average using standard deviation – let's call this value S. If S is small, it means that the daily peak demand is quite consistent. If S is larger, it means that there's a bit more variation; perhaps attendance spikes on Sundays, or over long weekends, or during sale periods.

4　　Once we know these values, we can use the normal distribution to evaluate the probability that a car park with a given number of spaces will overflow. For example, if $M = 750$ and $S = 100$, then a car park with 800 spaces will overflow on 33% of days, whereas a car park with 1,000 spaces will overflow on only 1% of days. Greater accuracy can be achieved by modifying this simple model to focus on the more extreme events.

5　　Parking bays should leave [33](1. alternative　2. token　3. ample) space around the cars to enable pedestrian access and to allow for the axle tracks of turning circles, so that vehicles can enter and exit smartly without cutting the corners of [34](1. farthest　2. adjacent　3. overlooking) bays. This can also be achieved with sufficiently wide access lanes, so that cars are parallel to the lines when entering their bays.

6　　Now consider the layout of parking spaces. [35](1. Admitting　2. Ignoring　3. Assuming) that the building has a rectangular plan, there are some simple rules that ensure a convenient and dense population of bays. Rather than having access lanes around the perimeter of each story, moving the lanes

inwards allows us to place bays around the edges and increases the number of spaces. Dead ends are undesirable, as they require drivers to reverse [36](1. against 2. with 3. over) the flow of traffic, so ramps should be located to avoid these. One-way flow systems throughout the car park also help to avoid congestion and confusion, while allowing access lanes to be narrower than for a two-way flow of traffic.

7   A diagonal layout of car parking spaces offers significant advantages over a rectangular layout. Imagine proceeding along an access lane and finding an empty bay. With a rectangular layout you need to change your direction of travel by 90 degrees, which requires a substantial lane width to [37](1. circumvent 2. eliminate 3. accommodate) your turning circle.

8   But for a diagonal layout, the bays on both sides are [38](1. inclined 2. declined 3. reclined) towards you. These require less course adjustment and the access lane can be narrower, so we can fit more parking bays into the same space. For a large car park, a 45-degree bay angle leads to an efficiency savings of 23%. You also need to change your direction of travel much less, so maneuvering is easier and safer when later reversing out of the bay.

9   If one were to design a new car park from [39](1. scratch 2. scribbles 3. script), one of the best of all systems is epitomized by the helical car park design. With one entrance, simple traffic flow, and one exit, it is safe for pedestrians and uses the available space efficiently. Crucially, it is also reasonably pretty. Perhaps IKEA should ditch its grid design, and [40](1. spin 2. provide 3. give) the helix a whirl.

—Based on Percy, D. (2016). "Here's what maths can teach us about how to design the perfect car park," *The Conversation.*

[41] In the 1st paragraph, the author would likely describe parking at IKEA as

1. mathematically sound.

2. abnormally distributed.

3. inefficiently designed.

4. reasonably attractive.

[42] Which of the following is _**NOT**_ true regarding the use of math to predict overcrowding in car parks?

1. Attendance increases on Sundays or holidays create larger standard deviations.

2. Smaller standard deviation values mean peak times are less varied.

3. Overflow can be estimated by using a normal distribution.

4. Knowing when an overflow will happen can predict extreme events.

[43] The author maintains that

1. Sunday afternoons are one of the busiest times for car parks in summer because people try to stay away from heat.

2. moving in and out of a car park can be done effortlessly and safely in a diagonal layout.

3. in rectangular designs, parking bays are typically more efficient than parking spaces.

4. customers appreciate being able to park immediately and economically, but too many parking spaces are unattractive and expensive.

[44] Which of the following would be a characteristic of a car park with a well-planned rectangular design?

1. Ramps to avoid dead ends

2. Lanes around the outside

3. Two-way flow of traffic

4. Wide access lanes

[45] In the last paragraph, one reason that the author recommends using a spiral type of car park is because

1. peak times can be more accurately predicted.

2. it decreases the risk of accidents for people.

3. it is more statistically and aesthetically appealing.

4. the room between each space is greater in helical grids.

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英語Ⅱ

次の文章に関して、空欄補充問題と読解問題の二つがあります。まず、[46]から[55]の空所を埋めるのに、文脈的に最も適切な語を1から3の中から選び、その番号を解答欄（46）から（55）にマークしなさい。次に、内容に関する[56]から[60]の設問には、1から4の選択肢が付されています。そのうち、文章の内容からみて最も適切なものを選び、その番号を解答欄（56）から（60）にマークしなさい。

1   In his book *Misbehaving: The Making of a Behavioral Economist*, Richard Thaler talks about his earliest days of collaboration with Daniel Kahneman and Amos Tversky, who were already giants in the field of cognitive psychology. In their 1974 paper "Judgment Under Uncertainty," Kahneman and Tversky took the academic world by [46](1. force 2. accident 3. storm), having proposed three straightforward cognitive biases of human decision making. Over the next few years, their further work on choice, risk, and uncertainty revealed even more [47](1. surpluses 2. demerits 3. anomalies) in decision making, which had such a powerful effect on other academic disciplines that in 2002 Kahneman won the Nobel Prize in Economics.

2   All of a sudden, people were paying attention to cognitive bias [48](1. once and for all 2. like never before 3. as per usual). Part of this involved rediscovery and renewed attention to some of the facts about human psychology that were so old no one could really be sure who had first discovered them. But along with these came fresh work that revealed a number of other built-in cognitive biases. And two of the most important for our purposes build on Peter Wason's earlier discovery of confirmation bias. These are the "backfire effect" and the "Dunning-Kruger effect," both of which are [49](1. rooted 2. elaborated 3. designated) in the concept of motivated reasoning.

3   Motivated reasoning is the idea that what we hope to be true may color our perception of what actually is true. We often reason, that is, within [50](1. an emotional 2. a rational 3. a historical) context. This is arguably the mechanism behind the ideas of dissonance reduction and confirmation bias, and it is easy to see why. When we feel psychic discomfort we are motivated to find a non-ego-threatening way to reduce it, which can lead to the irrational tendency to accommodate our beliefs to our feelings, rather than the other way around. Upton Sinclair perhaps [51](1. missed the mark 2. said it best 3. took it for granted) when he observed that "it is difficult to get a man to believe something when his salary depends upon him not believing it."

4   The idea of confirmation bias seems straightforwardly related to motivated reasoning in that it is customarily when we are motivated to defend the idea that one of our beliefs is right that we look for evidence to confirm it. We commonly see this mechanism at work in police detectives, who [52](1. consult 2. identify 3. punish) a suspect and then try to build a case around him, rather than search for reasons to rule him out. It is important here, however, to distinguish between motivated

reasoning and confirmation bias, for they are not precisely the same thing. Motivated reasoning is a state of mind in which we find ourselves willing – perhaps at an unconscious level – to shade our beliefs in light of our opinions; confirmation bias is the mechanism by which we may try to accomplish this, by [53](1. intercepting 2. interpreting 3. interrupting) information so that it confirms our preexisting beliefs.

5   In his work on the psychology of emotion and moral judgment, David DeSteno, a psychologist at Northeastern University, has studied the effect of "team affiliation" on moral reasoning. In one experiment, subjects who had just met were randomly divided into teams by giving them colored wristbands. Then they were separated. The first group was told that they would be given the option of performing either a fun ten-minute task or a difficult forty-five-minute one. Each subject was then placed alone in a room and told that he or she should choose which task to do or, to be unbiased, decide by a coin flip, but in either case the person who entered the room afterward would be left with the remaining task. What subjects didn't know is that they were being videotaped. Upon exiting the room 90 percent said that they had been [54](1. dishonest 2. unkind 3. fair), even though most had chosen the easier task for themselves and never bothered to flip the coin. But what is absolutely fascinating is what happened next. When the other half of the subjects were asked to watch a videotape of the liars and cheaters, they condemned them – unless they were wearing the same color wristband. If we are willing to excuse immoral behavior based on something as [55](1. trivial 2. colorful 3. crucial) as a wristband, imagine how our reasoning might be affected if we were really emotionally committed.

       —Based on McIntyre, L. (2018). *Post-Truth.*

[56] Why was Kahneman and Tversky's work so important in the field of economics?

1. Because their theory provided new insights into people's economic choices.

2. Because their work earned them a Nobel Prize in economics.

3. Because their theory made effective use of data from economics.

4. Because they adopted a method from economics into psychology in a new way.

[57] Which of the following would be "a non-ego-threatening way to reduce" the discomfort mentioned in the 3rd paragraph?

1. To take a risk depending on one's current emotional state of mind.

2. To reinforce one's belief by objectively examining the relevant facts.

3. To pursue an economic benefit irrespective of how others feel.

4. To embrace something that doesn't conflict with what you believe.

[58] What is the relationship between motivated reasoning and confirmation bias according to the author?

1. The former is an example of the latter.

2. The former actualizes the latter.

3. The latter is an example of the former.

4. The latter actualizes the former.

[59] What may be the hypothesis that DeSteno was trying to test in the 5th paragraph?

1. People often think they are acting rationally even when they likely aren't.

2. People feel it is easier to cheat when they are not being watched.

3. People tend to be lenient toward members of the same group.

4. People care more about their affiliation than their individual interests.

[60] Which of the following is the central idea being presented by the author?

1. Our scientific thinking is influenced by our emotions.

2. Decision making involves so many factors that it often becomes irrational.

3. People make determinations based on what they identify with.

4. Psychology and economics are strongly connected to one another.

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英語Ⅲ

次の文章に関して、空欄補充問題と読解問題の二つがあります。まず、[61]から[80]の空所を埋めるのに、文脈的に最も適切な語を1から3の中から選び、その番号を解答欄（61）から（80）にマークしなさい。次に、内容に関する[81]から[90]の設問には、1から4の選択肢が付されています。そのうち、文章の内容からみて最も適切なものを選び、その番号を解答欄（81）から（90）にマークしなさい。

1   It's harder than you might think to make a dinosaur. In the movie *Jurassic Park* they do it by extracting a full set of dinosaur DNA from a mosquito preserved in amber, and then cloning it. But DNA degrades over time, and to date none has been found in a prehistoric mosquito or a dinosaur fossil. The more realistic [61](1. prospect 2. parameter 3. problem) is to take a live dinosaur you have lying around already: a bird. Modern birds are considered a surviving line of theropod dinosaurs, closely related to the T. rex and velociraptor. Just look at their feet: "theropod" means "beast-footed". By tinkering with how a bird embryo develops, you can silence some of its modern adaptations and let the older genetic instructions take over. Enterprising researchers have already made a chicken with a snout instead of a beak.

2   This obviously adds to the general merriment of the world, and will eventually kickstart a roaring trade in exotic quasi-Jurassic pets. But there are a surprising number of other projects that aim to bring [62](1. up 2. along 3. back) more recently vanished wild animals, from the woolly mammoth to the Pyrenean ibex. Advances in gene-editing technology promise to make "de-extinction" a potentially [63](1. untenable 2. gullible 3. viable) enterprise, but what exactly is the point? To answer this question, the Swedish science journalist Torill Kornfeldt has travelled to meet with researchers who are raising a number of deep questions and paradoxes about our relationship with nature.

3   The last mammoth died only 4,000 years ago, which means that fragments of mammoth DNA can be recovered, and scientists have [64](1. pieced 2. shuffled 3. joined) together a complete picture of how the mammoth genome differs from that of the modern elephant. In Siberia, maverick mammoth-bone hunter Sergey Zimov wants to reintroduce mammoths to the landscape, while a US professor of genetics, George Church, is working on how to build them by splicing mammoth sequences into elephant DNA. But why? Church is motivated by the [65](1. simple joy 2. sour grapes 3. hidden agenda) of doing something new and perhaps even improving on evolution. "We might be able to do even better than the mammoth did," he says. Zimov and his son, [66](1. therefore 2. meanwhile 3. hereafter), point out that grazing megafauna such as mammoths, because of the way they knock over trees in heat-absorbing forests and root up the insulating top layer of snow on the ground, can actually keep overall temperatures down in their environment, and so counteract global warming.

4 This would only work, of course, at scale, if millions of mammoths were [67](1. buried underneath 2. roaming across 3. gathered from) the European continent, along with gigantic herds of aurochs (the wild forebears of modern cattle) and other ghosts from the past. Such a world is, indeed, what some people want to see, and here ideas of de-extinction coincide with the wishes of the modern rewilding movement, which wants to transform developed-world ecosystems by reintroducing wild animals, including predators such as wolves.

5 Part of the motivation is simply aesthetic, and part [68](1. detracts 2. derives 3. detaches) from a kind of species guilt. Scientists disagree over whether it was in fact humans, rather than early climate change, that killed off mammoths, giant sloths, and other megafauna, but reviving them, to some minds, would be a kind of symbolic expiation for all our other environmental depredations, returning us to a prelapsarian innocence in our relationships with other animals. Stewart Brand, the countercultural godfather of hi-tech ecology, tells Kornfeldt: "I want the cod in the ocean to be the size cod used to be, for example. People go to the national parks in Africa and look at savannah full of animals, masses of animals and different species. Europe used to be like that, North America used to be like that, [69](1. even 2. only 3. so) the Arctic had that wealth of fauna. That's my goal."

6 On views like this, a few human deaths by mammoth or wolf, let alone rampaging dinosaur, would be an acceptable [70](1. line in the sand 2. price to pay 3. needle in a haystack) for a more exciting environment of what Brand calls "bioabundance". Sweden's wild boars, descended from a few that escaped from parks in the 1980s, now cause "thousands of traffic accidents every year". And indeed another researcher, who is working on bringing back the passenger pigeon – millions-strong flocks of which [71](1. should 2. must 3. would) periodically devastate local flora in the US – sees its role precisely as an agent of creative destruction. "A forest needs a forest fire now and again," he says. Such visions are clearly based on an ecological nostalgia, a desire to return things to how they used to be and have them stay the same, and thus arise projects such as that to kill off "invasive mice" on islands off the coast of New Zealand, which is [72](1. anything other than 2. something beyond 3. nothing but) a kind of ecological eugenics.

7 But other thinkers in the field have long noted that any ecosystem is itself a process, always [73](1. in flux 2. in crisis 3. in vitro). As Kornfeldt asks: "Why should nature as it is now be of any greater value than the natural world of 10,000 years ago, or the species that will exist 10,000 years from now?" An excellent counterpoint to the kind of ecology that wants to [74](1. fight 2. take 3. turn) back the planetary clock is the recent book *Darwin Comes to Town*, by the Dutch biologist Menno Schilthuizen, which evinces great joy and optimism in its survey of how accelerating evolution is driving animals of all kinds to find new ecological niches in our cities.

8   A more pragmatic criticism of de-extinction is that it diverts resources from the attempt to save species that have not [75](1. yet 2. only 3. at all) become extinct. But the two are not necessarily competitive: in the case of the northern white rhino, of which there are only two in the world, they may be [76](1. contradictory 2. contemporary 3. complementary). Kornfeldt visits the splendidly named Frozen Zoo in San Diego, which since the 1970s has accumulated a collection of cells from nearly 1,000 species frozen in liquid nitrogen. By cloning cells from a dozen rhinos, the zoo's director Oliver Ryder hopes to re-establish a sustainable population; or, as Kornfeldt nicely puts it: "Twelve test tubes could enable new baby rhinos to rumble about once more like miniature armored vehicles."

9   The Frozen Zoo also contains cells from species that have [77](1. nearly 2. already 3. hardly) died out: for example, the Hawaiian poo-uli, a small grey bird with a black mask around its eyes. While scientists debated whether to try to catch the remaining birds, their numbers dwindled. Eventually a male was caught but no breeding partner could be found, and he died in captivity in 2004. His cells were sent to Ryder. "It was around Christmas," he tells Kornfeldt, "and I was sitting at the microscope examining the cells when it really [78](1. hit 2. delighted 3. confused) me – a sharp, intense realization that this species was gone now."

10   There are no right or wrong answers in this area, but as Kornfeldt implies, the [79](1. fossilization 2. rhetoric 3. consensus) of such debates still revolves around a few presumptive virtues that are rarely interrogated deeply. The aim of greater "biodiversity", for instance, often cited by the de-extinction researchers she interviews, is never, in truth, an absolute goal. We could save millions of people a year if we [80](1. propagated 2. eradicated 3. vaccinated) the malaria-carrying mosquito – perhaps, as researchers are now trying to do, by replacing them with genetically sterile individuals – but that would be a decrease in biodiversity. The fungi threatening to kill off some of our best-loved tree species are themselves organisms, as much as the trees they attack. Inevitably, those discussing such ideas are always choosing one species over another, and judging one ecosystem as somehow more authentic than another – not that nature itself cares much either way, being the most brutal engine of extinction on the planet.

—Based on Poole, S. (2018). "The re-origin of species by Torill Kornfeldt review – bringing extinct animals back to life," *The Guardian*.

[81] The movie *Jurassic Park* is mentioned at the beginning of the article to

1. showcase the ease with which scientists can bring back extinct species.

2. provide an example of how we can use DNA taken from ancient mosquitoes.

3. argue that even if the environment collapses entirely, nature will find a way.

4. illustrate that restoring extinct animals is easier in fiction than in reality.

[82] According to this article, which of the following is ***NOT*** one of the possible benefits of bringing back extinct animals?

1. It can affect the environment in ways that slow climate change.

2. It creates a sustainable, environmentally-friendly source of food.

3. It may generate new business opportunities for the pet industry.

4. It increases the variety and number of species in the environment.

[83] Given the description in the 4th paragraph, the "rewilding movement" seeks to achieve ecosystems

1. in which humans and wild animals can live together in urban environments.

2. that are as close to a wild state as possible, regardless of human safety.

3. reserved for wild animals and completely isolated from human inhabited areas.

4. that expose humans to more natural predators, especially in crowded cities.

[84] What can you infer about Stewart Brand from his statements in the 5th paragraph?

1. He thinks people can only see wild animals if they visit national parks.

2. He is lobbying governments to do more to protect natural preserves and forests.

3. He is researching how overfishing decreases the size of fish in the ocean.

4. He feels animals should be more numerous and diverse than they are now.

[85] Which of the following is the best example of the "ecological nostalgia" mentioned in the 6th paragraph?

1. Recreating extinct plants to restore a forest to its pre-modern state.

2. Using cloning to maintain the population of endangered animals.

3. Removing native insect species that harm traditional crops.

4. Studying how animals evolve to adapt to human environments.

[86] Which of the following best summarizes the phrase "a forest needs a forest fire now and again"?

1. You only hurt the ones you love.

2. You can't make an omelet without breaking a few eggs.

3. If you play with fire you will get burned.

4. If you can't stand the heat stay out of the kitchen.

[87] What is implied by the question Kornfeldt asks in the 7th paragraph?

1. One historical period of the Earth's environment is no more or less worth protecting than another.

2. Humans are only concerned with short-term benefits and not the effects their actions will have on the future environment.

3. Events that occurred 10,000 years ago will affect the types of animals that will exist in the future.

4. Researchers are limited to studying the history and current role of species and the environment on the planet.

[88] Which of the following are you most likely to find at the Frozen Zoo in San Diego?

1. Mosquitos preserved in amber

2. Artificially grown mammoth embryos

3. Breeding partners for the poo-uli

4. Cell samples of white rhinos

[89] Which of the following probably best describes the views held by the author?

1. Increasing biodiversity on Earth is by most standards the right course of action.

2. Views on biodiversity and extinction are often subjective and inconsistent.

3. It risks the global ecology to try to save animals from extinction.

4. Mammoths became extinct due to human-caused climate change.

[90] Which of the following most closely matches the author's assertion that nature is "the most brutal engine of extinction on the planet" in the last paragraph?

1. We should recognize that human-caused extinction is a natural phenomenon.

2. Greenhouse gasses from engines are a major cause of extinction in nature.

3. Extinction is a part of nature that is initiated by human interference.

4. Natural phenomenon unavoidably lead to irreversible changes in the ecosystem.

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