ハイレベル読解問題演習 31・32・33

（早稲田大・理工学部 2020）

Read Text I, Text II, and Text III and choose the best option from a - d for questions 1 -15.

Text I

[1] Air transportation is the safest form of transportation per kilometer travelled. In the rare case of an accident, however, the results are often devastating. Accidents in aviation rarely have a single cause, and human errors are involved in the majority of them.

[2] In road transport, the link between human error and fatigue has been established in several studies. The main causes of sleepiness and fatigue are 1) circadian* phase, 2) time awake, and 3) amount of prior sleep. In addition, time on task may induce fatigue when involving sustained attention. Individual differences are likely to play a role in sleepiness and fatigue related accidents, driving performance, as well as modify sleep length and performance during sleep deprivation. Individual differences in the circadian type are among the most systematically studied with several rating scales developed to assess an approximate phase in individuals.

[3] Also in aviation, human errors and improper decision-making are influenced by sleepiness and fatigue. Irregular working hours, working hours at inconvenient times of day, as well as frequent time zone crossings, characterize work life in aviation and all have a negative impact on alertness and may increase the risk of accidents.

[4] The problem of fatigue in pilots is almost as old as aviation itself. It was, however, not until the 1980s that Samn and Perelli (1982) developed a fatigue scale in order to subjectively measure fatigue levels in pilots, starting the investigation of the effect of multiple time zone crossings on pilot fatigue. Since then, several factors have been shown to play a role in pilot fatigue and performance, including the highly automated work environment of the cockpit, flying at night as well as flight duration, although it has been reported to be equally severe in short haul, as in long haul operations.

[5] One way of counteracting fatigue in aircrew is through flight and duty time limitations. However, regulatory bodies are currently discussing how to incorporate sleep and performance science directly into their fatigue risk management systems by means of bio-mathematical sleepiness and fatigue modeling. Several such models have been introduced over the past decades. Briefly, those include the two process model (2PM), the three process model of alertness (TPM, the subject of the present paper), the system for aircrew fatigue evaluation (SAFE), the interactive neurobehavioral model (INM), the sleep, activity, fatigue, and task effectiveness model (SAFTE), the fatigue audit inter dyne (FAID), and the circadian alertness simulator (CAS).

[6] The key processes in those models (except FAID) include, although with

different parameters: 1) a homeostatic* process that describes the decline of alertness with time awake and its recovery with time asleep 2) a circadian process that describes the diurnal* variation in alertness 3) a sleep inertia process that describes the delay after wake up before alertness resumes. In addition, some models estimate the decline of alertness with time on task (SAFE, FAID, and CAS). As the generated fatigue output, most models predict subjective alertness, except SAFTE (predicting performance effectiveness) and FAID (predicting violations based on risk threshold levels).

[7] As Matschnigg et al. (2011) state: "An important question to ask about any model is whether it has been validated against fatigue data from operations similar to those that you are interested in." To our knowledge, the only model that has been extensively validated in many occupational settings is the TPM, though the present study is the first attempt to validate it on aircrew. Many shift work studies have shown accurate alertness predictions at the group level. Although SAFE and SAFTE are specifically developed for use in aviation, those models still lack peer-reviewed validation.

[Adapted from Ingre, M., Van Leeuwen, W., Klemets, T., Ullvetter, C., Hough, S., Kecklund, G., Karlsson, D., & Torbjörn, Å. (2014) Validating and Extending the Three Process Model of Alertness in Airline Operations. *PLoS ONE* 9 (10): e108679.]

*circadian	showing a natural, internal process that regulates the sleep-wake cycle
*homeostatic	relating to the ability to adjust one's internal environment to maintain a state of dynamic constancy
*diurnal	daily

Questions 1 - 9 refer to Text I.

1. How is aviation described, as compared to road transport?
   a. It is much safer because pilots are less influenced by fatigue than drivers.
   b. Human errors are frequently the sole cause of accidents in aviation as well as road transport.
   c. It is much safer, but accidents are typically disastrous when they occur.
   d. Working time determines pilot performance, while sleep length determines driving performance.

2. What do the authors imply about research on fatigue before the 1980s?
   a. Flight duration was proven to be equally influential in short and long-haul flights.
   b. The highly automated work environment of the cockpit was shown to contribute to accidents.
   c. Multiple time zone crossings had been demonstrated as being an influential factor.
   d. Researchers had not developed any formal models of fatigue.

3. In paragraph [5], what does <u>their</u> refer to?
 a. limitations b. regulatory bodies
 c. sleep and performance science d. aircrew

4. What do 2PM, TPM, SAFE, INM, SAFTE, and CAS have in common?
   a. They include a cycle of alertness variation.
   b. They predict subjective alertness.
   c. They predict sleep duration.
   d. They include risk threshold levels.

5. Which of the three processes below (described in paragraph [6]) depend(s) on the amount of time since waking up?
   1) the homeostatic process
   2) the circadian process
   3) the sleep inertia process
 a. 1 , 2 , and 3 b. 1 and 3 only c. 2 and 3 only d. 1 only

6. Based on the information in the text, which of the following most clearly models pilots losing their concentration to a dangerous degree over the course of a flight?
 a. 2PM b. TPM c . FAID d. INM

7. Which of the following is explicitly contradicted by the text?
   a. Car, truck, and bus drivers are not affected by irregular work hours.
   b. Several mathematical models of sleepiness have been introduced for use in the aviation industry.
   c. The authors believe it is important to test theories in situations as close to real life as possible.
   d. There has not been much study of how people differ from each other in their circadian cycles.

8. Which of the following is the most likely reason that the authors have focused on TPM in their paper?
   a. TPM is the only model that encompasses three key processes in fatigue.
   b. TPM outputs an objective but not a subjective prediction of alertness in pilots.
   c. TPM has been widely tested in a variety of different work situations.
   d. TPM is crucially based on circadian phase, time awake, and amount of prior sleep.

9. How is the present paper unique?
   a. It is focused exclusively on TPM.
   b. It compares TPM with other models of fatigue.
   c. It is the first to evaluate TPM with aircraft crews.
   d. It attempts to provide peer-reviewed validation for several models of fatigue.

Text II (This text is a direct continuation from Text I.)

[8] Since its inception in 1990, the TPM has been extended with an extra component modeling a 12h ultradian process and a "brake" function that modifies homeostatic recovery during sleep. The added predictive power of these modifications have, however, not been properly validated on empirical data. In addition, the TPM has also used several different linear transfer functions between the internal alertness score and empirical data using the Karolinska Sleepiness Scale that may give very different levels of sleepiness as the output. The TPM has also been extended with a model based sleep generator that can be used to insert sleep periods into the data when such data is not available. This sleep generator has been shown to predict sleep reasonably well in one specific compressed shift sequence but has otherwise not been validated.

[9] A main objective of the present study was to validate the TPM on a group of aircrew in real life situations, using observed sleep and sleepiness data. Our second objective with the present study was to extend the model with estimates of individual differences and probability of sleepiness for ecological estimates of risk. The circadian system is a large source of individual differences that may be of particular importance for aircrews that often travel across several time zones and become exposed to jetlag. Our third objective was to explore the feasibility of adjustment of the circadian phase according to circadian type and acclimatization to a different time zone for improved predictions of aircrews.

[Adapted from Ingre, M., Van Leeuwen, W., Klemets, T., Ullvetter, C., Hough, S., Kecklund, G., Karlsson, D., & Torbjörn, Å. (2014) Validating and Extending the Three Process Model of Alertness in Airline Operations. *PLoS ONE* 9 (10): e108679.]

Questions 10-12 refer to Text I and Text II.

10. Which of the following is TRUE of paragraph [8]?
   a. It describes how TPM is superior to the other models listed and described in paragraphs [5] - [6].
   b. It criticizes the various ways that TPM has been validated relative to the processes in paragraph [6].
   c. It explains that research on TPM can be improved in a way also mentioned in paragraph [7].
   d. It shows how TPM satisfies some of the fatigue problems outlined in paragraph [4].

11. Which of the authors' three objectives described in paragraph [9] is most directly associated with the main issue raised in paragraph [7]?
    a. their main objective
    b. their second objective
    c. their third objective
    d. cannot be determined from the texts

12. The paragraphs in Text I and Text II can be grouped into three parts: Part A = [1] [2] [3], Part B = [4] [5] [6], and Part C = [7] [8] [9]. Which of the following best describes the primary roles of each of these three parts?
    a. Part A explains how human error causes accidents in air transportation; Part B explains how the FAID model differs from other fatigue models; and Part C explains how TPM is superior to other models.
    b. Part A describes the transportation industry in detail; Part B introduces some models relay specifically to air transportation; and Part C differentiates between TPM and both SAFE ant SAFTE models.
    c. Part A enumerates all of the factors that contribute to sleepiness and fatigue; Part B models of alertness to show which is best; and Part C explains a key quotation that criticizes the present study.
    d. Part A introduces the problem of fatigue in transportation; Part B describes several theoretical models of fatigue; and Part C describes why the present research will focus on TPM.

Text III

Biomathematical fatigue models are designed to take into account a range of factors relating to fatigue and to convert these into simple numerical scores representing fatigue risk. These scores can be used for performing comparisons (of schedules, for instance) or for evaluating a schedule against an upper fatigue limit. However, it is vital to avoid overly simplistic interpretations of the numerical estimates provided by the models.

Specifically, it is essential for any specified upper limit for fatigue scores to be validated in the operational environment in which they are to be used. The failure to validate limits or 'cut-off' scores in this manner could result in practices that undermine the quality of the fatigue risk management system (FRMS) and result in operational staff having minimal confidence in the system. In the worst case overreliance on biomathematical models could result in an FRMS that actually degrades fatigue management (Civil Aviation Safety Authority, 2010).

When a biomathematical model is included in an FRMS, complementary strategies to pro-actively identify and manage fatigue must also be considered. Flight crews and operational decision makers need to be educated to interpret the biomathematical model's output appropriately. The outputs of such models can give the illusion of being precise and quantitative despite the fact that they simply predict a qualitative measure such as subjective fatigue. Education, audits and the use of

additional objective measures should ensure that a balanced view of the opportunities and limitations of models is maintained within an organisation's fatigue risk management culture and operational practices. Scores derived from biomathematical fatigue models cannot provide a "green light" for operational safety, but should rather be used as one of a number of risk management controls and complemented, for example, by crew fatigue monitoring and practices for ensuring adequate rest and sleep (Civil Aviation Safety Authority, 2010). Finally the use of a model within an FRMS should be an iterative process, with fatigue measurements, task errors and incident data collected and used to refine both the model and the overall FRMS.

[Adapted from Branford, K., Lowe, A., Hayward, B., Cabon, P. & Folkard S. (2014) *Biomathematical Fatigue Models: Guidance Document.* Australian Government Civil Aviation Safety Authority.]

Questions 13 - 15 refer to Text I, Text II, and Text III.

13. What do all three texts have in common?
    a. They describe specific models of fatigue and their most relevant factors and use contexts.
    b. They emphasize that the models alone are not sufficient for controlling the risk of fatigue.
    c. They emphasize the necessity to test fatigue models in realistic target environments of use.
    d. They describe the specific investigative goals of their respective research papers.

14. Text III is taken from a guidance document provided by the Australian government to its aviation industry. This document is indirectly referenced in Text I or Text II. In which paragraph?
    a. paragraph [2] b. paragraph [5] c. paragraph [6] d. paragraph [9]

15. Which of the following investigative questions is LEAST directly motivated by the texts?
    a. In aviation accidents that are attributable to pilot fatigue, what proportion of cases were in contexts that had recently undergone an FRMS review?
    b. Which individuals in a national agency that is responsible for civil aviation safety can best become model aviation pilots and crew?
    c. How can individual differences in fatigue patterns best be represented in an extended TPM?
    d. What would be a suitable validation method for uniform standardized testing of any of the models used in an FRMS?

ハイレベル読解問題演習 34

（早稲田大・商 2020）

次の会話文を読み、下記の設問に答えよ。

Lili and Julia are college freshmen. They are moving into a university residence.

Lili: Hi, you must be Julia, right? I'm Lili, your roommate.

Julia: Hello! So good to meet you, finally.

Lili: (　1　) I was really looking forward to seeing you in person. I suggest we go up to check out the room first and make sure that everything works.

Julia: Good idea.

(*Entering their room a few minutes later*)

Lili: Looks good! I like the view and it is actually larger than I expected. Listen, I think this may be a good opportunity (イ)to go over some rules and our daily routines. (　2　)

Julia: Not at all. I agree it's important. What's your schedule going to be during the semester?

Lili: Well, even though I'm not a morning person, I have registered for a bunch of really early classes. I hope that will force me to start the day at a reasonable hour and manage my time better.

Julia: Actually, (ロ)that will work out quite nicely. I tend to keep an early schedule too. Though obviously before the exam session I can see myself staying up late.

Lili: (　3　) You're going to have a pretty tough schedule, I think. But if it gets really late, there is a common study room upstairs, open 24 hours. In fact, I will probably pull a few all-nighters myself. By the way, do you expect (ハ)to have people over quite a bit?

Julia: I don't know anyone in town yet, so I hope to make friends and bring them here once in a while, especially on weekends. Nothing too loud, mind you. I'll check with you first to make sure that it does not interfere with your plans.

Lili: (　4　) A lot of my friends are thinking about visiting Montreal. Most of the time they'll check into a hotel but do you mind if occasionally they stay here?

Julia: Hmm.... This place is a bit small. Where are they going to sleep?

Lili: Ah, I haven't thought of it yet but probably I'll spread a couple of sleeping bags on the floor. At any rate, it's not going to be often at all.

Julia: Well, listen. (ニ)We'll cross that bridge when we come to it. No point worrying about it now. Is there anything else?

Lili: (　5　) It seems (ホ)we are not going to have any major issues. Let's help your dad bring everything up to the room.

設問1. 空所(1)～(5)を埋めるのにもっとも適当なものを(a)～(j)からそれぞれ一つ選べ。ただし、各選択肢は一度しか使えない。

(a) All the best.
(b) I'd appreciate it.
(c) I hope you don't mind.
(d) Just a few more points.
(e) Likewise.
(f) So did I.
(g) That's understandable.
(h) We covered the basics.
(i) Would that be OK?
(j) You must be kidding me!

設問2. 下線部(イ)～(ホ)の意味にもっとも近いものを(a)～(d)からそれぞれ一つ選べ。

(イ) (a) to analyze systematically (b) to comply with
(c) to discuss briefly (d) to set aside

(ロ) (a) that will be a good arrangement
(b) that will be enthusiastically received
(c) that will present a major challenge
(d) that will require an urgent solution

(ハ) (a) to get a lot of calls (b) to go out frequently
(c) to receive many guests (d) to travel regularly

(ニ) (a) We'll have to reconsider our lifestyles.
(b) We'll need to do some shopping across the street.
(c) We'll talk about it again at the appropriate time.
(d) We'll work on this problem from now on.

(ホ) (a) our conversation is not really useful
(b) our lifestyles are pretty compatible
(c) we'll become close friends
(d) we'll have to discuss our differences a bit more

ハイレベル読解問題演習 35

（早稲田大・商 2020）

次の英文を読み、下記の設問に答えよ。

When someone sets out to improve their health, they usually take a familiar path: starting a healthy diet, adopting a new workout routine, getting better sleep, drinking more water. Each of these behaviors is important, of course, but they all (　イ　) physical health — and a growing body of research suggests that social health is just as, if not more, important to overall well-being.

One recent study published in the journal *PLOS ONE*, for example, found that the strength of a person's social circle — as measured by inbound and outbound cell phone activity — was a better predictor of self-reported stress, happiness and well-being levels than fitness data on physical activity, heart rate and sleep. That finding suggests that 【　あ　】, says Nitesh Chawla, one of the co-authors of the study.

Chawla says, "My lifestyle, my enjoyment, my social network, all of those are strong indicators of my well-being."

Chawla's theory is supported by plenty of (　ロ　) research. Studies have shown that social support —whether it comes from friends, family members or a spouse — is strongly associated with better mental and physical health. A robust social life, these studies suggest, can lower stress levels; improve mood; encourage positive health behaviors; improve illness recovery rates; and aid virtually everything in between. Research has even shown that a social component can (1)boost the effects of already-healthy behaviors, such as exercise.

Social isolation, meanwhile, is linked to higher rates of (2)chronic diseases and mental health conditions. The detrimental health effects of loneliness have been compared to smoking 15 cigarettes a day. It's a significant problem, especially since loneliness is emerging as a public health epidemic in the U.S.　According to recent surveys, almost half of Americans, including large numbers of the country's youngest and oldest adults, are lonely.

A recent study conducted by health insurer Cigna set out to determine what's causing those high rates of loneliness. Unsurprisingly, it found that social media, when used so much that it limits face-to-face communication, was tied to greater loneliness, while having meaningful in-person interactions and being in a committed relationship were associated with less loneliness. Gender and income didn't seem to have a strong effect, but loneliness tended to decrease with age, perhaps because of the wisdom and perspective afforded by years of life lived, says Dr. Stuart Lustig, one of the report's authors.

Lustig says the report (3)underscores the importance of making time for family and friends, especially since loneliness was inversely related to self-reported health and well-being. Reviving a passive social life may be best and most easily done by finding partners for enjoyable (　ハ　) like exercising, volunteering, or sharing a meal, he says.

Lustig stresses that social media should be used carefully and strategically, and not as a replacement for interpersonal relationships. Instead, he says, we should use technology "to seek out meaningful connections and people that you are going to be able to keep in your social sphere." That advice is particularly important for young people, he says, for whom heavy social media use is common.

Finally, Lustig claims that even small social changes can have a large impact. Striking up post-meeting conversations with co-workers, or even engaging in brief interactions with strangers, can make your social life feel more rewarding.

"There's an opportunity to grow those kinds of quick exchanges into conversations and into more meaningful friendships over time," Lustig says. "People should take those opportunities wherever they possibly can, because all of us, by nature, are programmed from birth to connect" — and because doing so (　ニ　).

(Adapted from *Time*, June 25, 2019)

設問1. 次の 1〜4 について、本文の内容にもっとも合うものを(a)〜(d)からそれぞれ一つ選べ。

1. The key message of this article is that
   (a) our physical health is directly related to the quality of our social life; therefore, we should invest time into cultivating personal relationships.
   (b) the intensity of one's social activities can tell us more about the person's overall health and should be used instead of conventional medical data.
   (c) the use of social media has a very strong impact on one's level of loneliness, so it is vital to minimize its use.
   (d) we should take every opportunity to interact with family and friends, and not waste time on short-time communication with people we do not know.

2. The study of the effect of our social life on health is particularly relevant today because
   (a) an active social life can reinforce the effects of physical exercise.
   (b) a significant minority of American adults suffer from loneliness.
   (c) people have many physical problems in today's society.
   (d) we can measure its impact more accurately today than ever before.

3. According to a study mentioned in this article,
   (a) being married and older made loneliness less likely.
   (b) generally, men suffered from loneliness much less than women.
   (c) older people were less lonely because they already had built strong social networks.
   (d) use of social media and a low salary promoted a sense of loneliness.

4. What is Dr. Lustig's opinion about social media?
   (a) Social media can serve to supplement face-to-face relationships by helping us find potential friends.
   (b) The greatest value of social media is its ability to connect young people who suffer from loneliness.
   (c) We should not be afraid to rely on social media to get to know as many people as possible.
   (d) Young people need to learn how to use social media effectively in order to maximize its usefulness.

設問2. 下線部(1)～(3)の意味にもっとも近いものを(a)～(d)からそれぞれ一つ選べ。

(1)	(a) decrease	(b) enhance	(c) minimize	(d) surpass
(2)	(a) heart-related	(b) infectious	(c) long-term	(d) serious
(3)	(a) emphasizes	(b) examines	(c)underestimates	(d) yields

設問3. 空所(イ)～(ニ)を埋めるのにもっとも適当なものを(a)～(d)からそれぞれ一つ選べ。

(イ)	(a) add to	(b) focus on	(c) go against	(d) rely on
(ロ)	(a) prior	(b) subjective	(c) superficial	(d) unrelated
(ハ)	(a) activities	(b) attractions	(c) developments	(d) performances

(ニ) (a) may allow you to overcome smoking problems
(b) may be beneficial for your health
(c) may negatively impact your lifestyle
(d) may reduce your dependence on social media

設問4. 本文のタイトルとしてもっとも適当なものを(a)～(d)から一つ選べ。
   (a) Loneliness: A New Health Epidemic Sweeping the United States
   (b) The Secret of Keeping in Shape, Both Physically and Mentally
   (c) When Traditional Ways of Staying Healthy Are No Longer Enough
   (d) Why Spending Time With Friends Is One of the Best Things You Can Do for Your Health

設問5. 空所【あ】を埋めるために、[　　　]の中の語を適切に並べ替えよ。
ただし、最初と最後の語は与えられている。
[amount / data / doesn't / endless / of / tell / the / whole]

the____ story

ハイレベル読解問題演習 36

（早稲田大・商 2020）

次の英文を読み、下記の設問に答えよ。

Workers, and possibly all people, can be divided into two groups. Those who like to be involved in everything can be called "FOMOS" because they suffer from a "fear of missing out". And then there are those who would ideally want to be left to get on with their own particular work, without distraction — the "JOMOS" (joy of missing out).

Readers will instantly know their tribe. If the boss announces a new project, do you immediately volunteer, thinking this will be a great chance to prove your skills? If so, you are a FOMO. Or, do you foresee the hassle involved, the likely failure of the project, and the weekend emails from all the FOMOS wanting to spend less time with their families? Then you are definitely a JOMO.

Another test is technology. FOMOS are early adopters, eagerly purchasing the latest devices and sending documents to colleagues via the latest file-sharing programme. JOMOS tend to believe that any tech upgrade will be initially troublesome and wonder why on earth their colleagues can't send the document as a pdf.

FOMOS (1)relish the chance to take part in a videoconference call so that they can share fully in the dynamics of the meeting and not miss any clues about the participants' long-term agenda. JOMOS deeply resent the video element, which prevents them from checking their emails or playing a game online.

Networking events are the kind of thing that gets FOMOS excited as a chance to exchange ideas and make contacts. When JOMOS hear the word "networking", they tend to react very (　イ　). For them, being forced to attend an industry cocktail party is rather like being obliged to attend the wedding of someone they barely know.

Similarly, FOMOS see a breakfast meeting as a chance to start the day on a positive note. They would hate to turn one down in case they lost business, or the chance of career advancement. JOMOS resent setting their alarm earlier and would rather eat breakfast at their kitchen table, (2)grumbling about the news headlines to their spouse. If it is a work meeting, then hold it during working hours.

As for business travel, FOMOS can't wait to experience the delight of overseas conferences and visiting new places. (A)It will all look good on their curriculum vitae. JOMOS know that such travel involves cramped airline seats, jet lag and a long shuffle through passport control lines. The final destination tends not to be some exotic location but a very (3)ordinary conference centre or hotel that they forget five minutes after they have departed.

JOMOS recognise that they have to attend some meetings and go on trips to get their work done. But they regard such things as a punishment not a (　ロ　). Something useful may come out of it, but best not to get their hopes up.

It might seem obvious that employers should look to hire FOMOS, not their

opposites. (ハ) , in a company full of JOMOS, sales might suffer and there would be little innovation. But while FOMOS are racing from meetings to networking events, you need a few JOMOS to be doing actual work. If FOMOS are like dogs, barking excitedly and chasing their own tails, JOMOS are more similar to cats. (B)They will spring into action if a mouse is in the vicinity but, in the meantime, they are content to sit and rest.

The other reason why depending on FOMOS is dangerous is that they are naturally (ニ) . JOMOS will be loyal, for fear of ending up with a worse employer. But FOMOS may think that working for one company means they are missing out on better conditions at another. That is obviously the point of most networking.

(Adapted from *The Economist*, February 2-8, 2019)

設問1. 次の 1～4 について、本文の内容にもっとも合うものを(a)～(d)からそれぞれ 1 つ選べ。

1. The writer of this article assumes that
   (a) a majority of business professionals are FOMOS.
   (b) most of the readers will identify with JOMOS rather than with FOMOS.
   (c) we all know dogs and cats do not get along very well.
   (d) we have a pretty good idea if we are FOMOS or JOMOS.

2. Which of the following is NOT discussed in this article?
   (a) attitudes of the two groups towards office innovation, including new machines, computer applications, etc.
   (b) respective reactions of the two groups towards opportunities to establish new professional contacts
   (c) the way FOMOS and JOMOS approach work-related trips to overseas destinations
   (d) the way the two groups interact with their respective colleagues within a company

3. According to this article, which of the following statements is true?
   (a) FOMOS and JOMOS both refuse to accept responsibility.
   (b) FOMOS are more important for a company than JOMOS.
   (c) FOMOS are more likely than JOMOS to work overtime.
   (d) FOMOS are more likely to stay longer in one company than JOMOS.

4. The conclusion we can draw based on this article is that
   (a) businesses should hire more FOMOS than JOMOS in order to be successful.
   (b) companies are required to have an equal number of JOMOS and FOMOS on staff.
   (c) FOMOS perform most of the work while JOMOS are relied upon only occasionally.
   (d) JOMOS are important for an organization because they end up doing most of the routine work.

設問2. 下線部(1)～(3)の意味にもっとも近いものを(a)～(d)からそれぞれ一つ選べ。

(1)	(a) consider	(b) ignore	(c) reject	(d) welcome
(2)	(a) clarifying	(b) complaining	(c) explaining	(d) reporting
(3)	(a) irregular	(b) local	(c) unremarkable	(d) urban

設問3. 空所(イ)～(ニ)を埋めるのにもっとも適当なものを(a)～(d)からそれぞれ一つ選べ。

(イ)	(a)enthusiastically	(b) furiously	(c) negatively	(d) spontaneously
(ロ)	(a) disadvantage	(b) penalty	(c) privilege	(d) routine
(ハ)	(a) After all	(b) Because of this	(c) Despite this	(d) Nevertheless
(ニ)	(a) arrogant	(b) careless	(c) passive	(d) restless

設問4. 下線部(A)と(B)と同じ意味を表すものを(a)～(d)から一つ選べ。

(A) (a) Business trips are seen as accomplishments in one's career.
   (b) Conference attendance makes their jobs more meaningful.
   (c) Travel overseas is important for a better business performance
   (d) Visiting new places is an exciting benefit of the job.

(B) (a) JOMOS are generally very lazy and only pretend to work hard when the boss is around.
   (b) JOMOS do not make any effort unless they feel personally threatened and then they fight back.
   (c) JOMOS hate to move much beyond their local area, so they make terrible salespeople.
   (d) JOMOS will work hard if they recognize a meaningful opportunity but at other times they will take it easy.

ハイレベル読解問題演習 37

（早稲田大・商 2020）

次の英文を読み、下記の設問に答えよ。

【　あ　】

Middle-aged and older people who live sedentary lives are up to two and a half times more likely to die early, researchers said. (A)たとえ座っていることが、立っていることや歩いていることによって中断されたとしても、そのリスクは残った。

Light activity such as cooking or washing-up could help lessen the risk. People who did regular physical activity of any intensity were about five times less likely to die early than those who were not physically active.

The study, in *The BMJ*, analysed existing research on physical activity and mortality in nearly (　i　) adults aged (　ii　) and older. Participants had an average age of (　iii　) and were followed for an average of just under six years, during which time (　iv　) died.

Their activity levels were monitored at the start of the research using devices that track physical movements and were categorised into "light intensity" such as slow walking, "moderate activity" such as brisk walking, vacuuming or mowing the lawn and "vigorous activity" such as jogging or digging.

After adjusting for potential influencing factors, researchers found that any level of physical activity was associated with a substantially lower risk of early death.

Deaths (　イ　) as total activity increased, before levelling off. People who did light intensity activity for about five hours a day, or moderate to vigorous activity for 24 minutes a day had the most health benefits.

There were approximately five times as many deaths among the 25 per cent of least active people compared with the 25 per cent most active.

Researchers looked separately at sedentary behaviour and found sitting still for nine and a half hours or more was linked to a higher risk of early death. The most sedentary people, who spent an average of nearly ten hours a day sitting, were at a 163 per cent higher risk of dying before they might have been expected to during the period of the study than the least sedentary, who sat for an average of seven and a half hours.

Ulf Ekelund, of the Norwegian School of Sport Sciences in Oslo, who led the research, said: "Our findings provide clear scientific evidence that higher levels of total physical activity, (　ロ　) intensity, and less sedentary time are associated with lower risk of premature mortality in middle-aged and older people."

Researchers from Germany and New Zealand said that the study was an important addition to existing knowledge but could not explain whether the distribution of activity across the day or week was relevant.

They added: "The clinical message seems straightforward: every step counts and even light activity is (　ハ　). "

Commenting on the research, Jess Kuehne, of the Centre for Ageing Better, said: "If we want to be healthy and (　ニ　) when we grow older, we need to do much more in our forties and fifties. As well as aerobic exercise like taking brisk walks, cycling or swimming, we also need to be boosting the strength in our muscles and bones and improving our balance. It's not just about adding years to our life, it's about adding life to our years and increasing the time that we stay fit, healthy and free from long-term health conditions or disability."

(Adapted from *The Times*, August 22, 2019)

注　a sedentary = requiring a sitting posture

設問1. 空所【あ】を埋めるのにもっとも適当なものを(a)～(d)から一つ選べ。

(a) Lower rates of early death are reported among middle-aged adults who exercise at least five days a week.
(b) Sitting still for nine and a half hours a day raises the risk of early death, a study has found.
(c) The results of recent research suggest that moderate exercise is more beneficial for health than light or vigorous physical activities.
(d) Young people do not exercise enough and spend almost 10 hours a day sitting, concludes a recent scientific report.

設問2. 空所(i)～(iv)を埋めるのにもっとも適当な数字の組み合わせを(a)～(d)から一つ選べ。

(a)	(i) 2,149	(ii) 62	(iii) 40	(iv) 36,400
(b)	(i) 36,400	(ii) 40	(iii) 62	(iv) 2,149
(c)	(i) 36,400	(ii) 62	(iii) 40	(iv) 2,149
(d)	(i) 2,149	(ii) 40	(iii) 62	(iv) 36,400

設問3. 空所(イ)～(ニ)を埋めるのにもっとも適当なものを(a)～(d)からそれぞれ一つ選べ。

(イ)	(a) fell steeply		(b) increased moderately	
	(c) remained unchanged		(d) soared to red dramatically	
(ロ)	(a) according to	(b) based on	(c) due to	(d) regardless of
(ハ)	(a) beneficial	(b) diagnostic	(c) extensive	(d) harmful
(ニ)	(a) affluent	(b) cheerful	(c) independent	(d) responsible

設問4. 下線部(A)を[　　]の中の語を並べ替えて英語に直せ。ただし、いくつかの語は与えられている。

[broken / by / if / remained / risk / sitting / standing / walking / was]

The _____ even _____

__ up _____ and _____ .

ハイレベル読解問題演習 38

（早稲田大・商 2020）

次の英文を読み、下記の設問に答えよ。

At many British universities, at the time of applications, the situation is close to panic. Each institution's future depends on securing enough students. (A)これは、政府の政策における変更を反映する。Admissions used to be managed, with limits set on the number of students each university could take. But beginning in 2012 restrictions began to be lifted, before disappearing entirely in 2015. Since then universities have been (　1　) to take as many as they want.

There is lots of variation, but in general elite institutions have undergone the biggest growth. Some, including Oxford and Cambridge, have chosen not to expand. But most prestigious universities have absorbed a lot of students, grateful for their fees, which subsidise research. The intake of British students at many older, research-focused universities has grown by 16% since restrictions were lifted. Some have ballooned. Bristol's intake has shot up by 62%, Exeter's by 61% and Newcastle's by 43%.

Universities (　2　) the rankings have fared less well. The intake of British students at institutions in the post-1992 group of universities, former polytechnics which offered vocational qualifications, is flat. London Metropolitan's intake is down by 42%, Kingston's by 33% and Southampton Solent's by 28%. Some have diversified by offering more qualifications sponsored by companies, postgraduate degrees or apprenticeships. Others are getting into financial difficulty.

Universities are keenly aware that they are mostly competing with a handful of rivals for students, and that geography plays a big role in determining who those rivals are. Exeter, in south-west England, has commissioned research which shows it attracts students who live near a major motorway that runs into town, and struggles to recruit from anywhere north of Birmingham, in the Midlands. The university therefore keeps a close eye on Bath and Bristol, nearby institutions (1)held in similar

regard. Mark Corver of dataHE, a consultancy, notes that many larger London universities, which take students with weaker grades, have struggled as the capital's secondary schools have got better, providing youngsters with the qualifications to aim higher. So too have universities in remote parts of the country, including Cumbria and Aberystwyth.

Students seem to prefer universities with campuses close together. Exeter is one example. Others include Aston, which takes 66% more British students than it did before the cap was lifted; East Anglia, which takes 34% more; and Bath, which takes 24% more. It tends to be easier to build on a campus than in a city centre, says Mike Nicholson, head of admissions at Bath. And for a generation of students who party less, study more and are often influenced by cautious parents, campus universities are a nice half-way point between school and adulthood.

Universities not attracting enough students have to adapt. Since the new system was introduced, almost all have charged the maximum allowed — now £9,250 ($11,250) a year. Since students are entitled to government loans, which they don't have to repay until they earn more than £25,725 a year, they are relatively unworried by upfront costs. But price competition has begun to emerge in the form of generous scholarships. A more common way to appeal to students is to lower the grades for entry. At its extreme, this takes the form of offers which do not require the applicant to achieve any grades at all, provided they make the university their first choice. Recruiting students will at least get easier as the number of 18-year-olds rises in 2021.

Improving a university's appeal through more reputable means is hard, but not impossible. Coventry has shot up in the rankings, and has a 50% bigger intake than a decade ago. In 2010 a "shocking" low score in its student-satisfaction survey (3) a reconsideration, says Ian Dunn, the university's senior administrator. Now feedback is requested midway through a course and students are informed of changes made as a result within five days. The university has set up a college which offers degrees from £6,350. It has also cut back joint courses, like accounting and

finance, which students enjoyed less. Before the rules changed, Exeter had gone further still, getting rid of weak departments, including chemistry. But nationwide, student satisfaction (2)is yet to rise, indicating these universities are in a minority (the measure is, though, a delayed indicator, as students fill in forms only after finishing their degree).

Growth is no guarantee of financial stability, as can be seen at Cardiff and Surrey, which have taken in lots more students but not enough to (4) their spending. That is little consolation for the small number of universities, struggling to attract applicants, which are said to be near bankruptcy. New policies have caused a great deal of change in higher education. But the growing number of students at elite universities would probably regard the change as (3)a price worth paying.

(Adapted from economist.com, August 22, 2019)

設問1. 次の 1～5 について、本文の内容に合うものは T、合わないものは F を書け。

1. There used to be restrictions on the number of students British universities could admit.
2. The main motivation for universities to increase the intake of students is to diversify their student population.
3. Improvements in secondary-level education in England have had a positive effect on enrollments in large London universities.
4. A way to boost a university's appeal to students is to offer financial incentives in the form of scholarships.
5. A majority of British universities have lived up to their students' expectations.

設問2. 空所(1)～(4)を埋めるのにもっとも適切なものを(a)～(d)からそれぞれ１つ選べ。

(1)	(a) clever	(b) forced	(c) free	(d) reluctant
(2)	(a) higher up in	(b) lower down in	(c) on top of	(d) way outside
(3)	(a) declared	(b) denied	(c) prompted	(d) requested
(4)	(a) accelerate	(b) exceed	(c) match	(d) triple

設問3. 下線部(1)～(3)の意味に最も近いものを(a)～(d)からそれぞれ一つ選べ。

(1)	(a) considered inferior	(b) rated highly
	(c) respected a great deal	(d) viewed as equals
(2)	(a) has already risen	(b) has not risen
	(c) is about to rise	(d) is unlikely to rise
(3)	(a) an inappropriate burden	(b) a necessary cost
	(c) an unreasonable expense	(d) a welcome contribution

設問4. 次の 1～2 について、本文の内容に合うものを(a)～(d)からそれぞれ一つ選べ。

1. Which of the following strategies is NOT mentioned in this article as a way to attract students at British universities?
   (a) Universities attempt to be more responsive to students' needs.
   (b) Universities get rid of unpopular academic programs.
   (c) Universities lower their admission requirements.
   (d) Universities recruit professors from rival institutions.

2. Students in the UK preparing their university applications
   (a) appreciate the fact there is a growing number of universities in rural areas.
   (b) are pleased that university fees have been cut.
   (c) are very concerned about the expense of higher education.
   (d) have a better chance to gain admission to many top-level-universities.

設問5. 下線部(A)を 8 語以内で英語に直せ。ただし、最初の語は与えられている。

This _____

ハイレベル読解問題演習 39

（早稲田大・政経 2020）

Read this article and answer the questions below.

Monkeys were taught in an experiment to hand over small stones in exchange for cucumber slices. They were happy with this deal.

Then the researcher randomly offered one monkey — within sight of a second monkey — an even better deal: a grape for a stone. Monkeys love grapes, so this fellow was thrilled.

The researcher then returned to the second monkey, but presented just some cucumber for the pebble. Now, this offer was insulting. Some monkeys would throw the cucumber back at the researcher in anger and disgust.

In other words, the monkeys cared deeply about fairness. What mattered to them was not just what they received but also what others got.

It is not only monkeys that are offended by inequality. For example, two scholars examined data from millions of flights to identify what factors resulted in "air rage" incidents, in which passengers become angry or even violent. One huge factor: a first-class cabin.

An incident in an economy section was four times as likely if the plane also had a first-class cabin; a first-class section increased the risk of a disturbance as much as a nine-hour delay did. (A)

Keith Payne, a professor of psychology at the University of North Carolina at Chapel Hill, tells of this research in a brilliant new book, *The Broken Ladder*, about how inequality destabilizes societies. It's an important, fascinating work arguing that inequality creates a public-health crisis in America.

The data on inequality reveals the shocking truth. The top 1 percent in America owns more than the bottom 90 percent. The annual Wall Street bonus pool alone is more than the annual year-round earnings of all Americans working full time at the minimum wage of $7.25 an hour, according to the Institute for Policy Studies. And what's becoming clearer is the weakening of the ties that hold society together.

Payne challenges a common perception that the real problem isn't inequality but poverty, and he's persuasive that societies are shaped not just by disadvantage at the bottom but also by inequality across the spectrum. Addressing inequality must be a priority, for we humans are social creatures, so society begins to break down when we see some receiving grapes and others cucumbers.

The breakdown affects not only those at the bottom, but also the lucky ones at the top. Consider baseball: Some team owners pay players a much wider range of salaries than others do, and one might think that pay inequality creates incentives for better performance and more wins.

In fact, economists have analyzed the data and (B) . Teams with greater equality did much better, perhaps because the players felt a closer bond with each other.

What's more, it turned out that even the stars did better when they were on teams

with flatter pay. "Higher inequality seemed to have a negative effect on the superstar players it was meant to motivate, which is what you would expect if you believed that the chief effect of pay inequality was to reduce cooperation and team unity," Payne notes.

Something similar emerges in national statistics. Countries with the widest gaps in income, including the United States, generally have worse health, more killings, and a greater range of social problems.

People seem to understand this truth instinctively, for they want much less inequality than we have. In a study of people in 40 countries, liberals said company presidents should be paid four times as much as the average worker, while conservatives said five times. In fact, the average president at the largest American public companies earns about 350 times as much as the average worker.

Presented with unlabeled charts depicting income distributions of two countries, 92 percent of Americans said they would prefer to live with the modest inequality that exists in Sweden. Republicans and Democrats, rich and poor alike, all chose Sweden by similar margins.

"When the level of inequality becomes too large to ignore, everyone starts acting strange," Payne notes. "Inequality affects our actions and our feelings in the same systematic, predictable fashion again and again."

"It makes us believe odd things, superstitiously clinging to the world as we want it to be (　C　)," he says. "Inequality divides us, splitting us into camps not only of income but also of ideology and race, eating away at our trust in one another. It generates stress and makes us all less healthy and less happy."

Think of those words in the context of politics today: Don't the terms "stress," "division," and "unhappiness" sound familiar?

So much of the national conversation gets focused on individuals such as Donald Trump — for understandable reasons. But I suspect that such people are a symptom as well as a cause, and that to uncover the root of these problems we must go deeper than politics, deeper than poverty, deeper than race, and confront the inequality that is America today.

Adapted from
https://www.nytimes.com/2017/06/03/opinion/sunday/what-monkeys-can-teach-us-about-fairness.html

1. Choose the most suitable answer from those below to complete the following sentence.

The monkeys that threw slices of cucumber back at the researcher

(a) disliked the type of cucumbers they were being given.
(b) failed to understand the importance of fairness.
(c) felt upset that other monkeys were getting better treatment.
(d) had no more stones they could throw at the researcher.
(e) thought the researcher wanted to have them.

2. Choose the most suitable order of sentences from those below to fill in blank space (A).

(a) However, in some flights, they get on in the middle of the plane.
(b) Looking at these two scenarios, the researchers found that an air-rage incident in economy was three times as likely when economy passengers had to walk through first class compared with when they bypassed it.
(c) When there is a first-class section, it is at the front of the plane, and economy passengers typically walk through it to reach their seats.

3. Choose the most suitable answer from those below to complete the following sentence.

Keith Payne suggests that we are mistaken to think that

(a) data regarding matters of inequality accurately reflects the true situation.
(b) earning the minimum wage will strengthen family relationships.
(c) humans can best be described as social creatures.
(d) poverty is the reason for the weakening of social ties.
(e) the disadvantage of being poor changes our perception of the value of food.

4. Choose the most suitable answer from those below to fill in blank space (B).

(a) discovered that the owners were right
(b) found that the opposite was true
(c) revealed that this helped to raise wages
(d) saw little value in their findings
(e) were unable to establish a relationship

5. Use six of the seven words below to fill in blank space (C) in the best way. Indicate your choices for the second, fourth, and sixth positions.

(a) is	(b) it	(c) rather	(d) so
(e) than	(f) the	(g) way	

6. Choose the most suitable answer from those below to complete the following sentence.

The writer concludes that dealing with the problems he describes requires us to

(a) distinguish between the causes and symptoms of unhappiness.
(b) focus on how unequal American society has become.
(c) increase the income of those at the bottom of society.
(d) remove controversial individuals from public office.
(e) understand the importance of racial tension in the U.S.

ハイレベル読解問題演習 40

（早稲田大・政経 2020）

Read this article and answer the questions below.

Rushing onto the open-air property in late May, officers from the Royal Thai Police found undocumented workers from Laos and Myanmar engaged in dangerous work that exposed them to blasts of toxic fumes and dust — a common risk in their illegal and booming international trade. The products these workers handled, however, were not drugs like heroin but vast piles of old computers, electrical wires, and circuit boards. And it's very likely that much of this electronic waste came from one of the world's biggest producers: the United States.

E-waste has become the world's fastest-growing trash stream. For all of us who have thrown out a phone or computer for a newer, better model, the reasons are hardly a mystery. Still, the growth is astonishing: The worldwide accumulation of e-waste has more than doubled in the last nine years. In 2016, according to the United Nations University (U.N.U.), a global think tank that tracks the problem, the yearly accumulation reached 49.3 million tons — (A) 18-wheel trucks stretching from New York to Bangkok and back. By 2021, the annual total is predicted to be over 57 million tons.

The explosion of e-waste highlights its dual (and dueling) identities as both environmental challenge and potential economic resource. Though often containing lead, mercury, and other poisonous substances, laptops and phones also contain elements like gold, silver, and copper that (B) . Yet barely 20 percent of the world's e-waste is collected and delivered to formal recyclers. The fate of the rest is largely unknown. Only 41 nations publish e-waste statistics, and their partial data can't keep up with the expansion of electronic devices into so many products, from toys and toilets to watches and refrigerators. In the United States, which generated an estimated 6.9 million tons of e-waste in 2016 (42 pounds per person), most e-waste probably goes straight into the trash. By one account, e-waste makes up just 2 percent of the total volume at American garbage sites — but more than two-thirds of relatively valuable heavy metals.

The United States has no national law for managing e-waste, leaving the issue to individual states. (Fifteen states still have no e-waste legislation in effect.) The European Union, by contrast, has some of the toughest enforcement of e-waste laws in the world, banning exports to developing countries and forcing manufacturers to help fund recycling. Europe's recycling rates for electronics — around 35 percent overall — are much higher than the American rate. "The U.S. has always been the elephant in the room that nobody wants to talk about," says Deepali Sinha Khetriwal, a Mumbai-based research associate at U.N.U. "Until it decides to play a part, we can't really solve the problem of e-waste shipments."

A significant but ultimately unknown portion of American e-waste is quietly exported, mostly to Asia. (C)

The expression "reuse and repair" is often used to hide illegal exports of e-waste.

This is supposedly garbage, but the extraordinary amount of dangerous e-waste activity in Pakistan and Ghana, for example, indicates the riches hidden in the piles of old electronics. According to researchers at U.N.U., the raw materials contained in e-waste were valued at roughly $61 billion in 2016, more than the gross domestic product of even middle-income countries like Croatia and Costa Rica.

The idea of "mining" e-waste has appealed to the recycling and electronics industries for decades. Until recently, most methods to recover valuable components have been costly, inefficient, and dangerous. Backyard recyclers in places like India and Indonesia recover gold by bathing circuit boards in nitric and hydrochloric acid, thus poisoning waterways and communities. Others, like the foreign workers in Thailand, break down used electronics with cooking stoves and shredding machines and wear no masks or other protection.

Over the last few years, however, innovators have devised safer techniques in the lab for recovering valuable components from e-waste. As the recovery of metals becomes more efficient and eco-friendly, tech manufacturers may feel pressure to get raw materials from their own end-of-life products rather than from the earth. Apple, for instance, has promised to make all of its future laptops and iPhones out of renewable resources or recycled materials. The idea goes beyond business to national security. "Governments are starting to take a more strategic view of e-waste, too," Khetriwal says. "They ask, `How can we secure the raw materials we need for the future?" Some of these metals and rare-earth elements are scarce, and some, like cobalt, are found mostly in conflict zones. By mining the ever-expanding mountains of e-waste, countries could prepare themselves for the instability of prices and supplies in the global market

Some e-waste optimists envision a "circular economy" in which reused and recycled raw materials help a sustainable future. Japan was an early leader of this movement, (D) e-waste recycling with tough laws and, more recently, (E) an appealing strategy for the 2020 Olympics in Tokyo. The idea is for winning athletes to receive gold, silver, and bronze medals made from recycled e-waste — symbolic of a world in which e-waste can take on the gleam of permanent glory.

To move toward a circular economy, manufacturers would also need to embrace a "green design" that minimizes the generation of e-waste in the first place. Companies like Apple and Dell, though, have not taken enough measures to make their products easier to use for a longer period of time. "Planned obsolescence," the intentional creation of products that rapidly become outdated so customers must replace them with ever-newer models, remains standard procedure for the tech industry. Manufacturers argue that the approach stimulates not only profits but also the very innovation that drives the global economy. And it has produced a Pavlovian response in consumers, for whom the temptation to buy a slightly cooler phone every couple of years has hardened into a seeming necessity. Not long ago, one tech manufacturer introduced a cheaper, longer-lasting phone — the perfect antidote to planned obsolescence. It was not a great success — but it was a good reminder that we all share some responsibility for the explosion of e-waste in scrapyards across

the world.

Adapted from
https://www.nytimes.com/2018/07/05/magazine/e-waste-offers-an-economic-opportunity-as-well-as-toxicity.html

1. Choose the most suitable answer from those below to fill in blank space (A) in the best way.

(a) able to drive (b) easy to move (c) enough to fill
(d) hard to stop (e) only to find

2. Use six of the seven words below to fill in blank space (B) in the best way. Indicate your choices for the second, fourth, and sixth positions.

(a) a (b) are (c) for (d) lot
(e) money (f) of (g) worth

3. Choose the most suitable answer from those below to complete the following sentence.

Regarding e-waste, the writer notes that

(a) American laws dealing with it are the same across all 50 states.
(b) it consists of both dangerous materials and valuable components.
(c) more than half is now being recycled worldwide.
(d) only 41 countries currently produce complete and accurate records.
(e) the amount produced is growing slowly year by year.

4. Choose the most suitable order of sentences from those below to fill in blank space (C).

(a) But in January, Beijing imposed a widespread ban on the import of e-waste as part of its "National Sword" campaign to cut the levels of what it calls "foreign garbage."
(b) Even before it came into full effect, Chinese waste traders were setting up shop in Thailand.
(c) Until last year, China was handling an estimated 70 percent of the world's e-waste.

5. Choose the most suitable answer from those below to complete the following sentence.

According to Deepali Sinha Khetriwal, governments are beginning to

(a) act more aggressively in their negotiations with mine owners.
(b) force companies to use only recycled materials.
(c) prepare for military conflict to secure rare resources.
(d) realize that metals and rare-earth elements may soon become worthless.
(e) show greater interest in e-waste with national security in mind.

6. Choose the most suitable pair of words from those below to fill in blank spaces (D) and (E).

(a) containing — covering
(b) destroying — demanding
(c) explaining — extending
(d) promoting — presenting
(e) removing — refusing

7. Choose the most suitable answer from those below to complete the following sentence.

According to the writer, tech manufacturers claim that "planned obsolescence"

(a) discourages consumers from buying new products.
(b) encourages technological advances that benefit the economy.
(c) generates profits that make it possible to hire more employees.
(d) leads to the production of phones that are cheap and long-lasting.
(e) results in a manufacturing process that reduces e-waste.