

英 語

問 題

2024年度

〈R06180017〉

注 意 事 項

1. この科目では、この問題冊子のほかに、マーク解答用紙を配付します。
2. 試験開始の指示があるまで、問題冊子および解答用紙には手を触れないでください。
3. 問題は2～11ページに記載されています。試験中に問題冊子の印刷不鮮明、ページの落丁・乱丁および解答用紙の汚損等に気付いた場合は、手を挙げて監督員に知らせてください。
4. 解答はすべて、HBの黒鉛筆またはHBのシャープペンシルで記入してください。
5. マーク解答用紙記入上の注意
 - (1) 印刷されている受験番号が、自分の受験番号と一致していることを確認したうえで、氏名欄に氏名を記入してください。
 - (2) マーク欄にははっきりとマークしてください。また、訂正する場合は、消しゴムで丁寧に、消し残しがないようによく消してください。

マークする時	● 良い	○ 悪い	○ 悪い
マークを消す時	○ 良い	○ 悪い	○ 悪い

6. 解答はすべて所定の解答欄に記入してください。所定の欄以外に受験番号・氏名を記入した解答用紙は採点の対象外となる場合があります。
7. 問題冊子の余白等は適宜利用してよいが、どのページも切り離してはいけません。
8. 試験終了の指示が出たら、すぐに解答をやめ、筆記用具を置き解答用紙を裏返しにしてください。
9. 問題冊子は持ち帰ってください。
10. いかなる場合でも、解答用紙は必ず提出してください。

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

Text I

[A] In 2019 there were 3,800 publicly disclosed data breaches, a significant increase over time. As security officers work to reduce the likelihood of breaches, there is an ongoing concern over the lack of user compliance with information security policies. Informational security policies depend on user compliance to protect computing resources. When users are lax with security measures and fail to follow security related directives, data breaches are more likely to occur. It is possible that users have capitulated and have decided that data breaches are inevitable and therefore their actions will not be effective in preventing data breaches in their organization.

[B] In business, feelings of capitulation have been described as resulting from a perceived lack of control and autonomy. In psychology, capitulation is considered an end state occurring when individuals realize they cannot change their undesirable reality and do not have control of a detrimental situation. The inverse of this definition can be applied to organizational security, when users feel that they have control over technologies and that they possess greater autonomy, they are much more likely to constructively take part in individual security management and not give up. When users feel they lack control and autonomy and that security controls are centralized, they are inclined to ignore technologies aimed at securing the organization.

[C] Organizational security has historically been controlled by policy making, placing the burden of security compliance on the end user; however, this has led some security researchers to suggest that the “user is not the enemy” (Adams and Sasse, 1999). Authoritarian responses to security produce conflict between the organization’s security interests and end users security behaviors. The manner in which users deal with these conflicts may include feelings of giving up, disengagement or capitulation. Often capitulation is viewed as a response to difficulty and equated to feelings of helplessness causing a person to fail to engage. Capitulation is defined here as the feeling of giving up or not acting because the behavior would not be productive or successful.

[D] Some research has supported the idea of negative security effects on employees and others report negative reactions based on punishment for information security policy violations which then lead to a reduction in the individual’s intent to comply. D’Arcy et al. (2014) considered that when organizations make employees responsible for computer security, they introduce stress into the work environment. These stressors may produce moral disengagement resulting in a lack of concern. D’Arcy et al. (2014) showed how organizational security expectations can fail due to moral disengagement. Of interest, employees experiencing security overload, complexity and uncertainty may turn to moral disengagement. These diminished security behaviors may be due to the time, effort and frustration employees feel causing employee security requirements to fail. Moral disengagement may lead to an appraisal of commitment to the information security policy. Capitulation may be the result, affecting information security policy non-compliance in organizations. Whether users reduce their efforts, stop trying, take on new pursuits, look for other meaningful behaviors or disengage from complying with information security policies, the end result is a reduction in security.

[E] Distrust is defined as the feeling that someone or something cannot be relied upon. An individual experiencing distrust feels they cannot accept another’s statements or actions at face value. They are suspicious and feel that people are out to deceive them. Distrust has been characterized as having negative expectations, and distrust has been linked to fear, wariness and suspicion. Interestingly, distrust can be associated with a person, place or thing and it can be valuable in preventing exploitation.

[F] Trust and distrust are not the same, although they are often interchanged. As an illustration, trust is created with positive feelings, while distrust is associated with negative feelings, however; it is not the case that high trust levels will lead to lower distrust levels. Distrust can be a positive force because it can lead individuals to be more aware of threat actors.

[G] Scrutiny of trust and distrust appears across many disciplines and research settings. Research on recommender agents established the difference between trust building and distrust building agents for information technology. The study results indicated that, within the context of technology applications, actions that build trust levels may not lower distrust levels. In fact, a disposition to distrust is the result of a lifetime of learned experiences. Factors that contribute to distrust are the reputation of the work organization and the individuals’ perception of negative aspects of the work environment.

[H] One interesting study suggested that individuals prone to distrust may avoid established security behaviors because they believe these actions can be anticipated by those seeking to deceive them. In consideration of human nature, it should be noted that, while individuals are predisposed to be trustful or

distrustful, this is not an “either or” designation. Specifically, the same individual may be trustful or distrustful depending on the scenario and various factors surrounding the context of that scenario. How these feelings affect whether users comply with information systems security policies and the impact of capitulation is important.

[Adapted from: McLeod, A., & Dolezel, D. (2022). Information security policy non-compliance: Can capitulation theory explain user behaviors? *Computers & Security*, 112, 102526.]

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Questions 1 – 9 refer to Text I.

1. Why is organizational security associated with autonomy?
 - a. Individual security management within organizations is more likely to occur when people experience greater autonomy.
 - b. Organizational security environments are strengthened by greater capitulation and autonomy.
 - c. Individual security management within organizations is more likely to occur when organizations impose authoritarian security responses.
 - d. Increases in capitulation and autonomy lead to centralized security controls.
2. Which of the following may result in a lack of concern for organizational security?
 - a. organizations failing to punish employees for security violations
 - b. employers introducing stressors which may lead to moral disengagement
 - c. decreasing the likelihood for an appraisal of commitment to the organizations' security policies
 - d. decentralizing security controls within an organization
3. Why can distrustful people benefit an organization?
 - a. They are more fearful.
 - b. They experience more negative feelings.
 - c. They feel that others cannot be relied upon.
 - d. They are more aware of threat actors.
4. What does the word capitulation mean in the text?
 - a. autonomy
 - b. end state
 - c. giving up
 - d. having control
5. Which of the following would the authors likely recommend for improving security?
 - a. End users treating the organization as the enemy.
 - b. Encouraging end user disengagement from security procedures.
 - c. Organizations providing more autonomy to end users.
 - d. Responding to capitulation using authoritarian means.
6. Which of the following may be included in computing resources as mentioned in paragraph [A]?
 - a. end users
 - b. data breaches
 - c. user compliance
 - d. cell phone PC applications
7. What type of feelings are associated with trust or distrust?
 - a. Negative feelings are associated with distrust.
 - b. Positive feelings are associated with distrust.
 - c. Negative feelings are associated with trust.
 - d. Feelings are not associated with trust or distrust.
8. Which of the following best describes the relationship between trust and distrust?
 - a. Trust and distrust are often the same concept.
 - b. Trust and distrust are associated with fear.
 - c. Increasing trust levels does not necessarily lead to decreased levels of distrust.
 - d. Positive feelings often lead to decreased levels of trust and distrust.
9. Paragraphs A – H of the text can be grouped into three parts: (i) – A, (ii) – BCD, and (iii) – EFGH. Which of the following best describes the roles of these three parts?
 - a. (i) reviews the main topic of the text, (ii) outlines the main topic in terms of capitulation, and (iii) defines the main topic in terms of trust-distrust.
 - b. (i) explains some background research, (ii) describes one method of establishing organizational security, and (iii) describes a competing method.
 - c. (i) defines some key terms for the entire text, (ii) explains how one of these terms relates to organizational security, and (iii) describes an alternative but controversial term.
 - d. (i) contextualizes the entire text, (ii) explains one fundamental concept related to establishing organizational security, and (iii) describes a related concept.

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Can capitulation theory explain user behaviors,
Computers & Security, Alexander McLeod and Diane Dolezel, Volume
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Text II

Information systems (IS) security administrators are responsible for keeping their information assets and systems safe from insider crimes' potential risks. Organizations have adopted two major strategies to prevent employees from committing insider attacks: (1) stimulating employees' conscience and (2) adopting techniques to reduce the opportunity of committing crimes. IS security administrators have curbed their employees' motivation for committing insider crimes.

IS security administrators need to eliminate the environmental opportunities that can be considered a crack for insiders' malicious attempts. According to the rational choice theory, malicious insiders are willing to commit malfeasances only when the expected rewards of malicious behaviors outweigh the anticipated risks or costs. Thus, IS security administrators need to focus on increasing costs and decreasing the anticipated benefits of malicious behaviors. This security policy is less likely to induce malicious insiders to put their plan into action (i.e., electronic monitoring and surveillance, access control, installing physical barriers), not solely relying on dealing with the internal motivations of insiders.

However, this approach at the organizational level is inherently coupled with the possibility of infringing on each employee's space. As there will be more restrictions imposed on each individual's actions, it may undermine the trust-based bilateral relationship between employees and employers. Moreover, employees having no choice other than consenting to the organizational policy might be problematic because of a massive bargaining power gap between employees and employers in this bilateral relationship.

Despite the seemingly nonexistent problems in procedures, employees have been forced to contract out their privacy rights even with their full awareness of the policy's potential to infringe on their personal spaces. Such a tremendous bargaining power gap may lead employees to have negative reactions, such as computer abuse. These reactions are potential adverse effects on organizational efforts that aim to minimize the opportunity of committing a crime from the perspective of malicious insiders.

[Adapted from: Jeong, M., & Zo, H. (2021). Preventing insider threats to enhance organizational security: The role of opportunity-reducing techniques. *Telematics and Informatics*, 63, 101670.]

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

10. Electronic monitoring and surveillance of end users by organizations mentioned in Text II is an example of which concept from Text I?
 - a. organizational capitulation
 - b. punishments for information security violations
 - c. authoritarian responses to security
 - d. benefits used to increase security compliance
11. Violating an employee's space most likely leads to which of the following outcomes from Text I?
 - a. moral engagement
 - b. capitulation
 - c. authoritarian responses
 - d. security compliance
12. Rational choice theory predicts which of the following outcomes?
 - a. Employees are less likely to commit malfeasances against organizations when the potential rewards and costs are approximately equal.
 - b. IS security administrators will focus on increasing benefits and decreasing costs for malicious insiders to prevent malfeasances.
 - c. IS security administrators will focus on increasing environmental opportunities and costs for malicious insiders to prevent malfeasances.
 - d. Employees are more likely to commit malfeasances against organizations when the potential rewards outweigh the costs.

Text III

Prior research has mainly focused on trust and largely ignored distrust, partly because of the assumption that trust building and distrust building are two ends of one continuum; thus, an IT (information technology) design that increases trust building in the IT will decrease distrust building at the same time. However, this assumption may not be true if trust-building and distrust-building processes in the context of IT usage are actually two separate and different processes. For example, a customer can use a web-based product recommendation agent (RA) to get personalized advice on which products to buy, based on his or her personal needs. Online customers have to trust an RA before complying with its advice. In our protocol analysis study, an RA explained a product feature (computer screen) in detail using technical language. We observed that

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Myeongki Jeong and Hangjung Zo,
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some users trusted this RA because its explanation was detailed and professional. But this RA's explanation feature does not necessarily automatically reduce distrust at the same time. Other users may not fully understand the technical explanation provided and their confusion about the RA's explanation may lead them to distrust the RA's competence and integrity. In another example, a finance website takes a while to download its contents. The downloading time may lead one customer to distrust the technical competence of the website because she does not know why she needs to wait so long. The same downloading time may lead to trust in the website if another customer believes the wait is due to many graphs and figures with valuable up-to-the-minute stock market information. Therefore, it is important to understand, through the collection of empirical evidence, the actual processes of trust building and distrust building, i.e., how users interpret an IT's features to form their trusting/distrusting beliefs.

[Adapted from: Komiak, S. Y. X., & Benbasat, I. (2008). A two-process view of trust and distrust building in recommendation agents: A process-tracing study. *Journal of the Association for Information Systems*, 9(12), 727-747.]

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

13. Which conclusion can be drawn from the information provided in Text I and Text III?
 - a. The same individual or different individuals may be trusting or distrusting depending on the context in which a decision is made.
 - b. Different individuals but not the same individual may be trusting or distrusting depending on the context in which a decision is made.
 - c. Recommender agents build trust among individuals with varied backgrounds regardless of the context in which a decision is made.
 - d. Recommender agents lessen distrust for individuals with varied backgrounds in all contexts in which a decision is made.
14. Users who lack understanding and autonomy when interacting with technology may experience which of the following?
 - a. abuse
 - b. suspicion
 - c. awareness
 - d. trust
15. Which of the following best describes the relationships between Texts I, II, and III?
 - a. Text I introduces two principles of organizational security and Texts II and III describe them in more detail.
 - b. Texts I and II explain some principles in organizational security while Text III exemplifies one of the principles.
 - c. Texts I, II, and III each define different principles of organizational security and Text III addresses a specific case.
 - d. Text I explains the principles of organizational security, Text II explains an alternative view, and Text III links the views.

Part II. Read the passage and rearrange the seven words in 1 – 5 in the correct order. Then choose from a – d the option that contains the third and fifth words.

From the point of view of strict logic, a rigorous course on analysis* should precede a course on calculus*. Strict logic is, however, overruled by both history and practicality. Historically, calculus, with its origins in the 17th century, came first, and made rapid progress on the basis of informal intuition. Not until well through the 19th ₁(claim / that / it / possible / was / to / century) the theory was constructed on sound logical foundations. As for practicality, every university teacher knows that students are not ready for even a semi-rigorous course on analysis until they have acquired the intuitions and ₂(come / that / sheer / skills / from / technical / the) a traditional calculus course. Analysis, I have always thought, is the *pons asinorum* (the bridge of asses, that is, a critical test of ability that separates the clever from the foolish) of modern mathematics. This shows, I suppose, ₃(we / in / much / have / progress / how / made) two thousand years, for it is a great deal more sophisticated than the Theorem of Pythagoras, which once received that title. All who have taught the subject know how patient one has to be, for the ideas take root gradually, even in students of good ability. This is not too surprising, ₄(than / two / it / since / took / more / centuries) for calculus to evolve into what we now call analysis, and even a gifted student, guided by an expert teacher, cannot be expected to grasp all of the issues immediately. I have not set out to do anything very original, since in a field as well-established as analysis,

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originality too easily becomes eccentricity. Although it is important to demonstrate the limitations of a visual, intuitive approach by means of some “strange” examples of functions, too much emphasis on “pathology” gives altogether the s(is / of / about / what / impression / analysis / wrong). I hope I have avoided that error.

[Adapted from: Howie, J. M. (2001). *Real Analysis*. Springer.]

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*analysis = the branch of mathematics concerned with the theory of functions, the use of limits, and the operations of calculus

*calculus = the branch of mathematics that deals with derivatives $\frac{d}{dx}f(x)$ and integrals $\int f(x)dx$ of functions

- | | | | |
|-----------------------------------|--------------------------------|-----------------------------|-----------------------------|
| 1. a. 3rd: was
5th: to | b. 3rd: to
5th: it | c. 3rd: it
5th: to | d. 3rd: to
5th: was |
| 2. a. 3rd: that
5th: technical | b. 3rd: technical
5th: that | c. 3rd: come
5th: sheer | d. 3rd: sheer
5th: come |
| 3. a. 3rd: progress
5th: have | b. 3rd: have
5th: progress | c. 3rd: we
5th: progress | d. 3rd: progress
5th: we |
| 4. a. 3rd: than
5th: took | b. 3rd: more
5th: since | c. 3rd: took
5th: than | d. 3rd: since
5th: more |
| 5. a. 3rd: what
5th: about | b. 3rd: of
5th: analysis | c. 3rd: about
5th: what | d. 3rd: analysis
5th: of |

Part III. Answer the questions in Sections A and B.

Section A: Read the text and choose the best option from a – d for questions 1 – 6.

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- Which of the blanks i, ii, iii, and iv must be filled with the article “A/a” or “An/an”?
a. i b. ii c. iii d. iv
- Which of the following best fits in blank A?
a. attracted b. to attract c. attractive d. attraction
- Which of the following best fits in blank B?
a. to b. over c. for d. against
- Which of the following best fits in blank C?
a. one b. for c. them d. with
- Which of the following best fits in blank D?
a. be seen b. see c. listen d. be listened to
- Which of the following best fits in blank E?
a. on b. at c. as d. to

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Section B: The five paragraphs [A] – [E] below make up a passage but are not properly ordered. Moreover, the five sentences (1) – (5) in paragraph [A] are not properly ordered, either. Read the passage and choose the best option from a – d for questions 7 and 8.

- [A] (1) For example, in an intervention using young non-gamer adults, we found that 2 weeks of playing Super Mario 3D World improved hippocampal-based memory performance relative to both active and no-contact control groups, with the amount of exploration in the game correlating with the amount of improvement.
- (2) In this study, 2-weeks of spatial exploration of the virtual world and building complex structures with resources gathered in the world resulted in a robust improvement in memory ability.
- (3) Prior research in our lab and others has demonstrated positive effects of large, immersive 3D video game playing on hippocampal-based memory ability.
- (4) In yet another study, we used Minecraft to more directly manipulate the amount and type of enrichment.
- (5) We found a similar effect in older adults (60–80 years) with 4 weeks of playing improving memory ability such that it matched performance of participants 15–20 years younger.

[B] One clear aspect of many modern video games is that they provide a novel, rich world to explore. Decades of neuroscience research dating back to pioneering efforts by Donald Hebb (Hebb, 1947) have shown that simply placing laboratory animals in enriched environments improves cognitive performance within a wide range of underlying neurobiological mechanisms.

[C] Thus, there is substantial neurobiological evidence to support the idea that environmental enrichment, even from video games, might have a positive effect on the hippocampus and the memory abilities it supports.

[D] Video games and Esports do not always enjoy a positive view in our society, despite the popularity of video games and the rising impact of Esports. Yet, at their core, modern video games often provide incredibly rich cognitive experiences, opportunities for problem solving, for competition, for teamwork, and for social interaction. As a result, gaming and Esports have the potential to provide considerable positive effects to the brain.

[E] This “environmental enrichment” can not only ameliorate age-related effects on memory and structures in the brain like the hippocampus, known to support memory, but it has been shown to reduce the presence of both the amyloid-beta plaques and the neurofibrillary tangles in mouse models of Alzheimer's Disease, rescue deficits in hippocampal neurogenesis and synaptic plasticity, improve hippocampal-based memory, and up-regulate neurotrophic factors important to environmental enrichment and hippocampal neurogenesis.

[Adapted from: Stark, C. E. L., Clemenson, G.D., Aluru, U., Hatamian, N., & Stark, S. M. Playing Minecraft Improves Hippocampal-Associated Memory for Details in Middle Aged Adults. *Frontiers in Sports and Active Living*, 3, 685286.]

7. Which of the following shows the best (most coherent) sentence order for paragraph [A]?
- a. 3-1-5-4-2 b. 2-1-4-5-3 c. 4-1-2-5-3 d. 5-2-3-1-4
8. Which of the following shows the best (most coherent) paragraph order for the passage?
- a. B-D-E-A-C b. D-A-B-E-C c. B-A-E-D-C d. D-B-E-C-A

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Stark CEL, Clemenson GD, Aluru U, Hatamian N and Stark SM (2021) Playing Minecraft Improves Hippocampal-Associated Memory for Details in Middle Aged Adults. *Front. Sports Act. Living* 3:685286. doi: 10.3389/fspor.2021.685286
Copyright © 2021 Stark, Clemenson, Aluru, Hatamian and Stark.

Part IV. Read the texts in Sections A and B and answer the questions.

Section A: Choose the best option from a – d for questions 1 – 5.

Ignatius Loyola, a nobleman, soldier, and later a priest, at the beginning of his only book, *Spiritual Exercises*, proposed a ground rule, termed the *presupponendum*. It reads:

“Every good Christian ought to be more eager to put a good interpretation on a neighbour's statement than to condemn it. Further, if one cannot interpret it favourably, one should ask how the other means it. If that meaning is wrong, one should correct the person with charity; and if this is not enough, one should search out every appropriate means through which, by understanding the statement in a good way, it may be saved.”

Obviously, Ignatius wrote it for Christians, and only in a specific context. However, we will try to show that this may serve as an inspiration for creating a procedure which preserves all the insights leading to the principle of charity while allowing us to learn from encounters with different epistemic perspectives and substantially improving one's own worldview.

Within Ignatius' rule we may distinguish four steps, which in fact amount to a procedure of “presupposing,” which will be very useful for modelling a dialectical principle of charity, as shown on the right.

1. RETRIEVE

If one cannot interpret it favourably, then:

2. ASK

If that meaning is wrong, then:

3. CORRECT

If this is not enough, then

4. FIND OTHER WAY

[Adapted from: Pruś, J., & Sikora, P. (2023). The Dialectical Principle of Charity: A Procedure for a Critical Discussion. *Argumentation*.]

1. Which of the following would be most consistent with the RETRIEVE step when arguing with someone?
 - a. Reject the statements that you favor and accept the ones you don't.
 - b. Question them until you get enough information to understand their position.
 - c. Point out how their statement is wrong with a focus on logical error.
 - d. Consider how to understand what they have said in a good way.

For the discussion below and questions 2–5, P, Q, and R are propositions (statements in an argument), and the prime mark (') indicates a modified version of a proposition.

- ① Jaime: P is true.
 - ② Sydney: (thinks: P is false) Do you really mean ____ is true?
 - ③ Jaime: Yes, I mean ____ is true.
 - ④ Sydney: But isn't it the case that not-P is true? Do you mean P' is ____?
 - ⑤ Jaime: Yes, you're right. ____ is true.
 - ⑥ Sydney: (thinks: Do I believe P' is true? It contradicts Q. Is Q false?)
2. If the discussion follows Ignatius' presupponendum, which of the following best fits in the four blanks, respectively?
 - a. Q, Q, false, Q
 - b. P, P, true, P'
 - c. P', P', true, Q
 - d. P', Q, false, P
 3. Which line(s) in the discussion correspond to the CORRECT step?
 - a. line ②
 - b. lines ②–④
 - c. line ④
 - d. lines ⑤–⑥

Consider the following definitions of two types of arguments.

Straw man argument – An argument that is formulated by a debater as a very weak form of their opponent's argument, often done by misrepresenting their opponent's argument so that it can be easily knocked down.

Steel man argument – A reformulation of an opponent's argument into the strongest argument possible based on what the opponent has said; often used to make the argument more intellectually challenging.

4. Which of the following is true?
 - a. The CORRECT step is basically an attempt to formulate a straw man argument.
 - b. The presupponendum could not be applied to a steel man argument.
 - c. The presupponendum could not be applied to a straw man argument.
 - d. The CORRECT step is basically an attempt to formulate a steel man argument.

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Article by Pruś, J., Sikora, P. The Dialectical Principle of Charity: A Procedure for a Critical Discussion. *Argumentation* 37, 577–600 (2023). <https://doi.org/10.1007/s10503-023-09615-8>.

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5. Which of the following replacements in the above discussion would constitute an example of making a straw man argument?
- line ②: (thinks: P depends partly on R and R is widely known to be false) So, you're saying R is true?
 - line ③: Well, actually, I think P' is true because R is false.
 - line ④: (thinks: P and P' are both true) But isn't it the case that P is false? Do you mean P' is false, too?
 - line ⑥: (thinks: Do I believe P'' is true? It is almost identical to P. Is P actually true?)

Section B: Choose the best option from a – d for questions 6 – 10.

When we want to solve a problem, we hold all the information relating to the problem in working memory. Unfortunately, working memory is highly limited. We can hold only three or four new items in working memory at any one time. This places a huge limit on our ability to solve problems. You can see this by increasing the length of a range of multiplication problems. If you are asked to solve the problem (A) mentally, then it is possible for you to succeed, because doing so does not require you to hold (B) new information in your working memory at once. But there is still a chance you will make errors, because you do have to use your working memory to remember a few things. You can solve this problem several ways; the following is probably the most common:

- ① $7 \times 6 = 42$.
- ② Put 2 down, carry 4.
- ③ $7 \times 4 = 28$.
- ④ Add 4 to $28 = 32$.
- ⑤ Remember you had put 2 down.
- ⑥ Thus, the final answer is (C).

Whatever method you use to calculate this, you have to hold one piece of information in your working memory while you work out the next piece. Then you have to recall the first piece of information because you need to do something that involves using it and the second piece together. It is typical when solving problems like this to forget the result of the first calculation by the time you have got to the end of the last calculation. Multiplying a three-digit number by a one-digit number would test working memory even further. And if you are asked to solve the problem (D) mentally, you almost certainly will not succeed. It is not that you do not know how to solve the problem; it is that solving it involves you holding far too many new pieces of information in your working memory at once.

[Adapted from: Christodoulou, D. (2014). *Seven Myths about Education*. Routledge.]

※ページ下部に出典を追記しております。

- Which of the following best fits in blank A?

a. 47×6	b. 7×40	c. 6×7	d. 46×7
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- Which of the following best fits in blank B?

a. enough	b. too much	c. a little	d. any
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- Which of the following best fits in blank C?

a. 30	b. 34	c. 232	d. 322
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- In the given example solution, which is a plausible pair of values for it and the second piece, respectively, at some point in working out the problem?

a. 28, 42	b. 6, 7	c. 4, 28	d. 2, 28
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- Which of the following best fits in blank D?

a. $410,000 \times 2$	b. $\pi \times 1,000$	c. $23,759 \times 42$	d. $3 \times 1,111,111$
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Part V.

For questions 1 – 15, two definitions are given with one sample sentence each. Think of a word that matches both definitions and also fits in the blanks in both sentences. Convert each letter of the word into a number 1 to 4 according to the table below: number 1 represents letters *a – g*, 2 represents *h – m*, 3 represents *n – s*, and 4 represents *t – z*. Then choose the matching sequence of numbers from options a – d. For example, if the word you think of is *wise*, for which the first letter *w* is given, the remaining letters would be changed into 2 for *i*, 3 for *s*, and 1 for *e*. Hence, the correct answer would be *w231*.

Number	Letters
1	a, b, c, d, e, f, g
2	h, i, j, k, l, m
3	n, o, p, q, r, s
4	t, u, v, w, x, y, z

- (i) to fasten or hold something in place: The truck driver (*r*)ed the load on the truck with a chain.

(ii) to control a strong urge or emotion: The tour guide couldn't (*r*) her anger at the tourist's rude behavior.

a. *r1343123* b. *r134131* c. *r124123* d. *r1131341*
- (i) to oppose something: The expert's testimony at trial (*c*)ed the testimony given earlier by the main eyewitness.

(ii) in formal logic, a proposition that cannot possibly be true: The proposition A is B and A is not B is a logical (*c*)ion.

a. *c234223214* b. *c334311214* c. *c32331114* d. *c23124*
- (i) a surface connecting two levels of different heights: The construction worker had to maneuver the load carefully along a narrow (*i*) to reach the upper floors.

(ii) to have a tendency to do or be something: If motivated, the professor was (*i*)d to keep lecturing well past the end of the class hour.

a. *i4421321* b. *i232311341* c. *i312231* d. *i11341*
- (i) money that is specially provided for a project: The researchers were extremely pleased that their multi-million dollar (*g*) proposal had been accepted.

(ii) to allow something: The neighborhood zoning committee (*g*)ed permission for the construction of a new children's nursery and playground.

a. *g313* b. *g213* c. *g3134* d. *g3112*
- (i) rough: The rock had a very (*h*) surface.

(ii) severe or rigorous: The winter conditions at the top of the mountain were very (*h*).

a. *h1332* b. *h32234* c. *h12144* d. *h34*
- (i) an organization or agency usually dedicated to education or research: When the error was discovered, the (*i*) immediately issued a correction and a public apology.

(ii) to establish a formal policy: At the start of the next fiscal year, the company will (*i*) a new policy to counter harassment within the workplace.

a. *i23213134* b. *i33424441* c. *i334142134* d. *i34331421*
- (i) a result or effect: The government's actions were predicted to have dire (*c*)s on the financial health of the country.

(ii) great importance: As it turned out, the decision was of little (*c*) to the everyday lives of the citizens.

a. *c3331341311* b. *c32124233* c. *c1231* d. *c1314*

8. (i) to increase in number: As the club captain, her responsibilities will (*m*).
 (ii) to reproduce (of living things): Bacteria (*m*) in warm, moist conditions.
 a. *m4242324* b. *m333413* c. *m13* d. *m11314*
9. (i) making something fit: The new industry regulations required many (*a*)s by several producers, leading to temporary price increases.
 (ii) a place to spend a night: There are many online businesses that can provide suitable (*a*)s for budget-minded travelers.
 a. *a12442134* b. *a241331441* c. *a113223114233* d. *a14241423*
10. (i) to change the nature, purpose, or function of something: The old laboratory building was (*c*)ed to office and classroom space to support the university's expansion.
 (ii) a person who has changed their religious or political affiliation: The holy site attracted a large number of (*c*)s who came to strengthen their faith.
 a. *c2231* b. *c232242* c. *c241* d. *c334134*
11. (i) a numerical code that identifies a location: After receiving the (*c*)s over the radio, the navigator determined their location and found they were way off course.
 (ii) to oversee or manage some project or effort: Because of the huge commitment involved, nobody wanted to (*c*) the organization's annual fundraising drive.
 a. *c24141233* b. *c3331314* c. *c333123141* d. *c1212141*
12. (i) to suggest something as a logical result: The experimental findings (*i*)d that a long-accepted theory was in doubt and needed re-examination.
 (ii) to bring into an incriminating connection: The executive was (*i*)d in the scheme to avoid paying taxes by offshoring company income.
 a. *i23221* b. *i23221141* c. *i3211411* d. *i33311341*
13. (i) of or related to the end of life: We were devastated to learn that our pet had late stage (*t*) cancer and would probably not live more than a few more weeks.
 (ii) a station or port that represents the end of a transportation line: Due to the stormy weather, the ferry reached the (*t*) over two hours late.
 a. *t44212232* b. *t3221123* c. *t34332321* d. *t1322312*
14. (i) the background or situation in which an event occurs: The (*s*) for the opening scene of the film is a university graduation ceremony in the mid-20th century.
 (ii) the parameters under which a machine or mechanism operates: After you open your browser, you'll need to change certain (*s*)s in order to make it run more securely.
 a. *s144231* b. *s1332431* c. *s3313224* d. *s3134332*
15. (i) soundness of a person's moral character: While many in the public cast strong suspicions on them, the board of trustees showed (*i*) in their honest dealings with the matter.
 (ii) the quality or state of being whole or complete: The waves buffeted the ship during the heavy storm, but its structural (*i*) held and it completed its journey safely.
 a. *i43421343* b. *i34113244* c. *i33332313* d. *i21333213*

[End of Exam]