

I. [A] In each of the following groups (1)–(5), the position of the strongest stressed syllable in one word is different from the other three. Choose that word and mark the appropriate number (1–4) on your answer sheet. Count the syllables from the beginning of the word.

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|-----|---------------|--------------|---------------|--------------|
| (1) | 1. orthodox | 2. explicit | 3. casualty | 4. sovereign |
| (2) | 1. diplomat | 2. lobbyist | 3. chancellor | 4. attendant |
| (3) | 1. beneficial | 2. recipient | 3. petroleum | 4. refinery |
| (4) | 1. Israel | 2. Korea | 3. Canada | 4. Vatican |
| (5) | 1. OPEC | 2. NATO | 3. UNESCO | 4. UNICEF |

[B] Each of the following groups (6)–(10) contains a sentence which is not grammatically correct. Choose that sentence and mark the appropriate number (1–4) on your answer sheet.

- (6) 1. Which is you?
2. Which are you?
3. What is you?
4. What are you?
- (7) 1. John was seen at the station yesterday.
2. John was blown about by the wind.
3. John was shot at at the station.
4. John was stolen his wallet yesterday.
- (8) 1. Grammar is a pleasure to study.
2. Hawaii is a pleasure to live.
3. Opera is a pleasure to conduct.
4. Pizza is a pleasure to make.
- (9) 1. The more students work for more than five hours a day.
2. The common voter here does not worry about foreign policy.
3. Ordinary office workers have two weeks' holidays in August.
4. The general reader does not understand hidden meanings.
- (10) 1. The article says nothing relevant to the problem.
2. She spoke, "Quiet, please" to the audience.
3. Please tell me another story.
4. He always talks in his sleep.

II. In the dialogue that follows, words or phrases have been removed and replaced by spaces numbered (11)—(25). From the boxed lists [A], [B] and [C] below, choose the most appropriate word or phrase (0—9) to fill each of the numbered spaces. In each list, each choice can only be used once. (Note that initial capitals have been ignored.)

<p>[A] Questions (11)—(15)</p> <p>0. surely 1. maybe so 2. as you know 3. it's not true 4. you're telling me</p> <p>5. there you are then 6. well, as you can see 7. don't change the subject</p> <p>8. that's pretty common here 9. that's not what I meant at all</p>
<p>[B] Questions (16)—(20)</p> <p>0. maybe so 1. to my surprise 2. so, you're saying 3. there you are then</p> <p>4. that's one example 5. come to think of it 6. don't change the subject</p> <p>7. that doesn't make sense 8. but I can't help wondering</p> <p>9. that's not what I meant at all</p>
<p>[C] Questions (21)—(25)</p> <p>0. fantastic 1. permanently 2. but never mind 3. that's one example</p> <p>4. how do you mean 5. well, as you can see 6. well, it's possible, isn't it</p> <p>7. but I can't help wondering 8. mine is already switched off</p> <p>9. and I thought I was the cynical one</p>

Sarah: Did you see that little girl? She's so tiny and yet she is all dressed up in her uniform traveling by herself to school on the train!

Masao: Oh yes, (11).

Sarah: But she can't be more than 6 years old. Don't her parents worry?

Masao: She's probably a bit older than that, actually. (12), we East Asians always look younger to Westerners.

Sarah: (13) ! It probably won't be long before people start thinking you're my son!

Masao: Now, now—just because you've got a couple of grey hairs!

Sarah: Setting my great age aside, even if that girl is a bit older than I thought, (14) she's too young to travel by herself.

Masao: (15), there are plenty like her.

Sarah: I know, that's what I can't believe.

Masao: And the station employees will keep an eye on children.

Sarah: (16), but if I was her mother I would be worried sick all the time.

Masao: (17), some friends of mine say they can't relax properly till their children get home.

Sarah: (18).

Masao: But the most worrying time is when children are walking home by themselves. I think that's the same everywhere.

Sarah: (19) they're safer in a crowd?

Masao: Yes, I think so. Anyway, recently there have been a lot of new inventions that help keep children safer.

Sarah: Like mobile phones you mean?
 Masao: Yes, (20) . There are also sensors built into vending machines that register when children walk past.
 Sarah: (21) ! This country always comes up with hi-tech solutions, doesn't it?
 Masao: I'm glad you're impressed, (22) if it's not more to do with increasing sales.
 Sarah: (23) ?
 Masao: Well, I'm not completely convinced these devices are very effective. After all, we're only talking about a tiny handful of cases, and I'm not even sure that the number has really been increasing.
 Sarah: Just exaggerated by the media you mean?
 Masao: (24) ? Crime statistics are notoriously hard to interpret, so nobody knows whether there has really been a sudden crime wave or not. But we do know that the mobile phone market for the under-tens has made great strides!
 Sarah: (25) !

III. Read the passage below and answer the questions that follow.

I'm sitting in Small World Coffee, a coffee shop near Princeton University. I'm here because my editor has ordered up a story on the question of whether caffeine makes you smarter. And without three espressos today instead of the regular two, I wouldn't feel ⁽³⁶⁾ equal to the task. But experience tells me that as soon as the strong dose of caffeine takes effect, I (26) become more alert, focused, quick-witted, clever. As far as I'm concerned, ⁽³⁷⁾ the case is already closed.

That's (27) a subjective assessment, but controlled laboratory experiments say (28) the same thing. Just last month Austrian scientists reported on a study showing that the equivalent of two cups of coffee boosts short-term memory at least (29) . And that's just the latest in the long line of tests proving that caffeine enhances mental performance.

Indeed, there has been lots of surprisingly good news in general about caffeine and coffee. You would (30) assume that an addictive drug like caffeine—the most (31) consumed psychoactive drug on the planet—must surely be bad for you, and initial studies suggested it might lead to bladder cancer, high blood pressure and other ills. However, more research has (32) not only ⁽³⁸⁾ refuted most of those claims but also come up with some significant benefits. Caffeine appears to have some protective effect against liver damage, Parkinson's disease, diabetes, Alzheimer's, depression and maybe even some form of cancer. The only proven medical downside appears to be that the blood pressure is significantly elevated, which is a problem only if you already suffer from hypertension. Some studies have also suggested a higher risk of miscarriage in pregnant women, but those results are (33) controversial.

While most of the findings about the effects of caffeine remain open to further testing, caffeine's ability to boost your brainpower has been proved beyond reasonable doubt. Harris Liberman, a research psychologist in the U.S., says caffeine cannot change intelligence, an inherent quality that is (34) part of your makeup, but it can heighten mental performance.

Caffeine's real power ⁽³⁹⁾kicks in, though, when you are tired. Again caffeine does not make you inherently smarter; it just lets you call more (35) on the intelligence you already have. Caffeine is just a single chemical, of course, whereas coffee contains scores of substances. Some of them are antioxidants, which could explain part of its protective effect against disease. Further research would ⁽⁴⁰⁾augment our knowledge of coffee's ability to increase concentration without increasing irritability. For patrons crowding this coffee shop, all of that is ⁽⁴¹⁾beyond the immediate point, which seems to be nothing more than getting the morning dose of coffee before setting off to conquer the intellectual challenges waiting at the university just up the street.

[A] Considering that each word can only be used once, choose the word that can best be used to fill each space (26) — (35), and mark the appropriate number (0—9) on your answer sheet.

- | | | | | |
|----------------|----------------|----------------|----------------|------------|
| 0. temporarily | 1. naturally | 2. purely | 3. effectively | 4. exactly |
| 5. highly | 6. immediately | 7. permanently | 8. recently | 9. widely |

[B] In the text, there are six underlined expressions (36)—(41). In each case, decide which of the following is closest in meaning and mark the appropriate number (1—4) on your answer sheet.

(36) equal to the task

1. interested in the task
2. capable of the task
3. satisfied with the task
4. worthy of the task

(37) the case is already closed

1. I do not want to talk about it any more
2. the effect of caffeine is final
3. I have already told you what I wanted to say
4. the power of caffeine has already been proved

(38) refuted

1. proved
2. disproved
3. approved
4. disapproved

(39) kicks in

1. gradually appears
2. causes us a problem
3. suddenly takes effect
4. works unexpectedly

- (40) augment
 - 1. demonstrate
 - 2. complete
 - 3. complicate
 - 4. enrich

- (41) beyond the immediate point
 - 1. not necessary
 - 2. not interesting
 - 3. not relevant
 - 4. not enough

IV. Below is a sequence of questions, numbered (42)—(50), from an interviewer to a Japanologist. Beneath them are the Japanologist's replies, numbered (0—8). Choose the number of the reply that most appropriately follows each question, and mark that number (0—8) on your answer sheet. Each number can only be used once.

〈Interviewer's Questions〉

- (42) Have you always been interested in Japanese culture?
- (43) That opened up a totally new world, I suppose?
- (44) How are they different?
- (45) But why do they have to have all those?
- (46) Do you yourself have a clear sense of the difference?
- (47) So it's very difficult to learn the language?
- (48) So what you mean is that the Japanese language appeals to the ear, as well as the eye?
- (49) Do you think the Japanese language is unique?
- (50) But Japanese people do seem to be very flexible in adapting other cultures. Do you think this is reflected in their language?

〈Japanologist's Replies〉

- 0. Yes, that's right. Take, for example, haiku, a type of Japanese poem. It is composed of 5-7-5 syllables. The poet condenses meaning, emotion and even ambience into this restricted form. Sound as well as rhythm works compellingly here.

- 1. I should say so! But the most important moment was when we happened to have a Japanese exchange student in our class in middle school. Thanks to her, I was able to experience the culture directly. What fascinated me most was that the same sounds could signify totally different ideas or things. Later she told us that they use three kinds of letters or signs, namely, *hiragana*, *katakana* and *kanji*.

2. Well, I guess all of us have our own way of using even our own mother tongue, which we acquire only by using the language. So my sense of language might not be shared by other people. It is my opinion, however, that *hiragana* conveys a “soft” atmosphere while *katakana* gives the impression of remoteness or aloofness.
3. In some ways, the answer is easy. *Hiragana* and *katakana* are syllabic, so that each *hiragana* and *katakana* represents a certain sound. *Kanji* are more like pictures. For example, the *kanji* for “mountain” looks like a mountain. You can think of them as pictures which also represent sounds. Of course, it’s more complicated than that.
4. You can say that again! But that’s not the end of it. There are a very large number of words which express sounds—like “buzz” in English. On top of that, there are also words which evoke feelings or atmospheres. They provide the language with its particular lyricism. I should say the Japanese have a special talent for creating sound, even out of atmosphere.
5. It sometimes seems so. But when I was in elementary school, my parents took me to an exhibition of Japanese calligraphy and I’ve been totally enamored of it ever since then. The writing did not look like letters at all. I thought it was a new form of abstract drawing. Still, it had a definite universe of its own.
6. Yes and no. Apart from the complex writing system, there are certainly big differences from most other languages; and Japanese people do have a hard time to learn other languages.
7. It’s a matter of alertness to what’s going on in the world. If they cannot find an equivalent concept for some phenomenon, they are very flexible in taking the foreign word as it is into Japanese, using *katakana*. Of course, sometimes the meaning might change over time.
8. Well, this is where the subtlety is. They choose them according to the object or the situation. For example, they use *katakana* to express words of foreign origin. Also there are subtle differences between *hiragana* and *katakana*. I should say they convey a different atmosphere even though they express the same sound. *Kanji* is very useful to express an idea at a glance. Using these three, they can convey their ideas with great delicacy.

V. Read the article below and answer the questions that follow.

- [A] I take my 14-year-old daughter to the Darwin exhibition at the American Museum of Natural History. At the entrance there are two turtles from the Galapagos Islands. One is hidden from view; the other rests in its cage, utterly still. “They could have used a robot,” my daughter remarks, thinking it a shame to bring the turtle all this way when it’s just going to sit there. She is both concerned for the imprisoned turtle and unmoved by its

authenticity. The museum has been advertising these turtles as wonders—among the plastic models, here is the life that Darwin saw. Many other children agree with my daughter that, in this setting, aliveness doesn't seem worth the trouble. One 12-year-old girl says confidently: "For what the turtles do, you didn't have to have the live ones." Her father looks completely puzzled: "But the point is that they are real, that's the whole point."

[B] Consider another situation: a woman in a nursing home outside Boston is sad. Her son has broken off his relationship with her. I am recording the woman's reactions as she sits with the robot Paro, a seal-like creature advertised as the first "therapeutic robot" for its supposed positive effects on the ill, the elderly and the emotionally troubled. Paro is able to make eye contact by sensing the direction a human voice is coming from; it is sensitive to touch, and has "states of mind" that are affected by how it is treated—for example, it can sense whether it is being stroked gently or more aggressively. The woman, depressed because of her son's abandonment, comes to believe that the robot is depressed as well. She turns to Paro, strokes him and says: "Yes, you're sad, aren't you. It's tough out there. Yes, it's hard." And then she pets the robot once again, attempting to provide it with comfort. And in so doing, she tries to comfort herself.

[C] What are we to make of this? When I talk to others about it, their first associations are usually with their pets and the comfort they provide. I don't know whether a pet could feel or smell or sense some understanding of what it might mean to be with an old woman whose son has chosen not to see her anymore. But I do know that Paro understood nothing. The woman's sense of being understood was based on the ability of objects like Paro—"relational artefacts," I call them—to convince their users that they are in a relationship by pushing certain "Darwinian" buttons (making eye contact, for example) that cause people to respond as though they were in a relationship.

[D] In the past, the power of objects like dolls and teddy bears has been tied to the ways in which they enabled the child to project meanings onto them. The doll or the teddy bear didn't change, didn't do anything. Relational artefacts are decidedly more active. With them, children's expectations that their dolls want to be hugged or dressed don't come only from the child's projecting a fantasy or desire onto lifeless playthings, but from the digital doll crying or even saying: "Hug me!" or "It's time for me to get dressed for school!" In the move from traditional transitional objects to contemporary relational artefacts, projection gives way to engagement.

[E] Children of the early 1980s came to define what made people special in opposition to computers, which they saw as our nearest neighbours. Computers, the children reasoned, are rational machines; people are special because they are emotional—emotional machines. In 1984, when I completed my study of the first generation of children who grew up with electronic toys and games, I thought that children might come to take the intelligence of artefacts for granted, to understand how they were created, and gradually give them less importance. I did not imagine how quickly robotic creatures that presented themselves as having both feelings and needs would enter mainstream American culture. By the mid-1990s, as emotional machines, people were not alone.

[F] Tamagotchis, virtual creatures that live on tiny screens housed in small plastic eggs, were the first relational artefacts to enter the American marketplace. They were presented as creatures from another planet that needed both physical and emotional nurturing. And when these first virtual creatures grew under their care, what children said about aliveness changed: they no longer discussed the “aliveness” of a relational artefact in terms of its motion or ability to reason. They came to describe robotic dolls as alive or “sort of (59)” not because of what the robots could do—either physically or (60)—but because of their own (61) connection to the robots and their fantasies about how the robots might feel about them.

[G] In the early 1980s, I met a 13-year-old, Deborah, who responded to the experience of computer programming by speaking about the pleasures of putting “a piece of your mind into the computer’s mind and coming to see yourself differently.” Twenty years later, 11-year-old Fara reacts to a play session with Cog, a humanoid robot at MIT that can meet her eyes, follow where she is in the room, and imitate her movements, by saying that she could never get tired of the robot because “it’s not like a toy because you can’t teach a toy; it’s like something that’s part of you, you know, something you love, kind of like another person, like a baby.” The contrast between the two responses reveals a shift from projection onto an object to engagement with a subject.

[H] How will interacting with relational artefacts affect people’s way of thinking about what, if anything, makes people special? The sight of children and the elderly exchanging caresses with robotic pets brings science fiction into everyday life. The question here is not whether children will love their robotic pets more than their real-life pets or even their parents, but rather, what will “loving” come to mean? One woman’s comment about AIBO, Sony’s household entertainment robot, is important for what it suggests about the future of person-machine relationships: AIBO “is better than a real dog. It won’t do dangerous things, and it won’t betray you. Also, it won’t die suddenly and make you feel very sad.” Relationships with computational creatures may be fascinating, perhaps educational. But they don’t teach us what we need to know about understanding others. To say all of this about our love of our robots does not diminish their interest or importance. It just puts them in their place.

- (51) Which of the following statements can best be derived from paragraph [A]?
1. Children nowadays don’t have much knowledge of real animals.
 2. Children nowadays can’t tell the difference between real and artificial animals.
 3. Children nowadays don’t believe in Darwin’s theories.
 4. Children nowadays don’t think it matters whether exhibited animals are alive or not.
- (52) Which of the following best represents the meaning of this sentence from paragraph [A]: “She is both concerned for the imprisoned turtle and unmoved by its authenticity”?
1. She doesn’t care whether it is suffering or not, but she cares that it might be real.
 2. She doesn’t care whether it is real or not, but she cares that it might be suffering.
 3. She doesn’t care whether it is suffering or not, because it isn’t real.
 4. She knows that it is not suffering, because it isn’t real.

- (53) Which of the following is the best definition of “therapeutic,” which appears in paragraph [B]?
1. acting rapidly
 2. having a healing effect
 3. being good value for money
 4. being technologically advanced
- (54) Which of the following best summarizes the function of a device like Paro, as it is described in paragraphs [B] and [C]?
1. It provides inexpensive nursing care.
 2. It reduces the need for pets in old people’s homes.
 3. It provides comfort by mimicking emotional reactions.
 4. It reduces the burden on relatives.
- (55) From the way the writer expresses her opinion in paragraph [C], we can tell that:
1. she thinks animals might perhaps understand something of human emotions.
 2. she thinks “relational artefacts” might perhaps provide more real comfort than living pets.
 3. she thinks animals cannot understand human emotions.
 4. she thinks people’s reactions to Darwin are too unthinking.
- (56) Given the context of paragraph [C], which of the following is the best equivalent for the phrase “pushing certain ‘Darwinian’ buttons”?
1. securing some Victorian-era fasteners
 2. prompting some instinctive reactions
 3. ensuring some ways of survival
 4. clicking some links on a Darwin-related website
- (57) Which of the following best represents the meaning of this sentence from paragraph [D]: “In the move from traditional transitional objects to contemporary relational artefacts, projection gives way to engagement”?
1. Children no longer just pretend that their toys are real, they react to them as if they were.
 2. Instead of just looking at toys, children are much more likely to handle them.
 3. Children used to be interested in a toy only for a short time, but now they play with each toy for longer.
 4. Slowly modern children are coming to understand that their toys are not real.
- (58) Which of the following best summarizes the content of paragraph [E]?
1. I expected that children would grow less interested in machines, but this didn’t happen because machines became able to show emotion.
 2. I expected that children would grow more interested in machines as they became able to show emotion.
 3. I thought that people would always be alone in showing emotion, but it turned out that I was wrong.
 4. I thought that machines would also come to show emotion, but it turned out that I was wrong.

(59)—(61) Three words have been removed from the final sentence of paragraph [F]. From the following list, choose the word that is most appropriate for each of the numbered blanks (59)—(61).

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|----------------|----------------|-------------|----------------|-----------------|
| 0. emotional | 1. alive | 2. dead | 3. resting | 4. mechanically |
| 5. competently | 6. unemotional | 7. mentally | 8. theoretical | 9. cautious |

(62) In paragraph [G], the child Fara thinks that her robot Cog is not a toy because:

1. it is too expensive to be a toy.
2. it is not suitable for a baby to play with.
3. robots can't be toys.
4. it reacts to her feelings.

(63) In paragraph [H], what does the writer say that the woman's reaction to AIBO implies?

1. that humans don't understand how robots work
2. that humans like robots because they are easy to keep
3. that there is still a long way to go before robots can replace living pets
4. that humans like robots because they don't cause any stress

(64) Which of the following would make the most suitable title for this article?

1. Darwin's Turtles
2. Robot Love
3. Robots Lose Their Popularity
4. No More Walking the Dog

(65)—(68) Look at the numbered statements (65)—(68) below. From the list given, select the number corresponding to the person whose point of view that statement best represents, based on the information given in the article.

(65) Robots may not be alive but they understand your pain.

(66) Models can be just as instructive as real animals.

(67) Computers can think something if you think it for them first.

(68) Whether it's a machine or not, if something relates to you, you must respond to it.

- | | |
|--------------------------------------|---|
| 1. the author's 14-year-old daughter | 2. Deborah |
| 3. Fara | 4. the woman in the nursing home outside Boston |