



## 英 語 問 題

はじめに、これを読みなさい。

1. この問題用紙は 21 ページある。ただし、ページ番号のない白紙はページ数に含まない。
2. 解答用紙に印刷されている受験番号が正しいかどうか、受験票と照合して確認すること。
3. 監督者の指示にしたがい、解答用紙の氏名欄に氏名を記入すること。
4. 解答は、すべて解答用紙の所定欄にマークするか、または記入すること。所定欄以外のところには何も記入しないこと。
5. 問題に指定された数より多くマークしないこと。
6. 解答は、必ず鉛筆またはシャープペンシル(いずれも HB・黒)で記入のこと。
7. 訂正する場合は、消しゴムできれいに消し、消しくずを残さないこと。
8. 解答用紙は、絶対に汚したり折り曲げたりしないこと。
9. 解答用紙はすべて回収する。持ち帰らず、必ず提出すること。ただし、この問題用紙は、必ず持ち帰ること。
10. 試験時間は 90 分である。
11. マーク記入例

良い例	悪い例
	

I 次の文章を読んで、以下の問に答えなさい。

A 75-year-old Georgian\* woman who says she has never even heard of the internet is facing a possible prison sentence for single-handedly cutting off the web to an entire country. Georgian police arrested Hayastan Shakarian after she allegedly hacked through a fibre\* optic cable that runs through Georgia to Armenia, while digging for copper. With one stroke, the pensioner plunged 90% of internet users in Armenia into online darkness for nearly 12 hours.

The episode is a timely reminder that all it takes in our hi-tech world to shut down thousands of companies for a day is a determined old lady with a shovel. Research carried out in October 2010 by Avanti Communications offered a snapshot of just how fundamental the internet had become to businesses. The survey of companies worldwide suggested only 1% could function adequately without the internet. More than a quarter (27%) of those surveyed said they could not function at all if the internet went down, and one in five said a week without being online would be the death of their company.

"In the past, network downtime might have prevented a batch of communication at the end of the day," says Chris Kimm, vice-president at Verizon Business. "Today it could mean no phones, no e-mail, no customer database, no ordering systems, no supply chain visibility and effectively, no capability to conduct business."

Oliver Pettit, from professional services company Deloitte, says key questions to network providers should include whether they can guarantee close to 100% network uptime. "Moreover, companies should query how resilient the provider's network is to disruptions and what technology it has in place\* to support its services," he says.

Some solutions on offer are quite straightforward. One network provider, Geo, runs all its cable through the Victorian sewers\* in London. This solves one of the major problems that makes telecom lines in many countries vulnerable to

being cut — they are laid on top of utility pipes. Not only does this mean they are mere centimetres under the ground — but whenever repairs are done to utilities, the workmen have to get past the fibre optic wires first, meaning inevitable incidences of cuts

Other technologies on offer to providers — which will in turn help their customer stay connected — are mind-boggling\*. For example, a company called OptaSense offers to stop potential breaks in service by listening to any threats as they approach. Using advanced sonar techniques, the company converts the fibre optic cable carrying the precious internet signal into an acoustic microphone. It can then tell the network provider exactly what is getting too close for comfort — be it a vehicle, human footsteps, digging or drilling.

Avanti Communications is one of a handful of companies that offer 24-hour instantaneous back-up via a dedicated satellite. It launched its first satellite in November, which covers Europe, and plans to launch one covering the Middle East and India next year. Chief executive David Williams says satellite technology will play an ever more important role in communications networks. “Fibre optic cable costs around £150 per metre\* to dig, so building cable networks is incredibly expensive,” he says. “But one satellite can cover the whole of Europe — so wherever you are, it can get to you.”

Insurance companies have been slow to jump on this bandwagon, but products are now becoming available to cover losses caused by network failure. Alan Thomas, of insurer Hiscox, says each policy\* is bespoke\*. “Insurers love statistics to determine risk, but we just don’t have them because it’s a young product,” he says. He adds that businesses have been slow to take up these policies but predicts a big increase in interest as soon as an outage leads to a high-profile loss for a big company.

The future of networks is causing sleepless nights for IT professionals and policy makers alike. The appetite for data across the globe is growing at an extraordinary rate and is putting an immense strain on the system. “A lot of the

basis of the internet today was invented 30 years ago,” says Tim Fritzley, InTune Networks chief executive. “In the 90’s when people were envisioning the first part of the web even the most optimistic soothsayer\* never saw anything like social networking. They didn’t see 10% of what is going on now,” he says. InTune is working with the Irish government on its Exemplar Network. This aims to vastly increase network capability worldwide by enabling a single strand of fibre to carry not just one signal from one operator, but data from up to 80 telecoms and TV companies at once.

Developers are working furiously to make sure our increasing hunger for data does not mean a collapse of the system. But whether this will protect users from pensioners looking for copper remains to be seen.

出典：‘The anti-social network: avoiding online darkness’, by Michael Millar, BBC News (一部省略・変更しました)

注：Georgian：グルジアの fibre = fiber in place：すぐに使用可能な  
the Victorian sewers：ビクトリア女王の時代に作られた地下下水道  
mind-boggling：驚くべき metre = meter policy：保険プラン  
bespoke：オーダーメイドの soothsayer：予言者

(問1) 下線部(ウ)(エ)(オ)(キ)(ク)の内容に最も近いものをそれぞれ1つ選び、その番号を解答欄にマークしなさい。

(ウ) uptime

- 1 operational hours
- 2 security
- 3 speed
- 4 time needed to upload

- (工) query how resilient the provider's network is to disruptions
1. ask how quickly the provider's network is able to recover from difficult conditions
  2. ask how convenient the network is going to be for the providers as well as the users
  3. ask how difficult it could become for providers to continue operation
  4. ask how unreliable the network services would be in the worst situation

- (才) Some solutions on offer are quite straightforward.
1. Some ideas given to solve the problem are very simple
  2. Some ideas for solutions are strange and very complicated.
  3. Some people proposed directly to the company ways to solve the problems.
  4. Some people expressed firm resolutions to protect the internet.

- (≠) bandwagon
1. vehicle
  2. musical instrument
  3. new product
  4. trend

- (夕) an outage leads to a high-profile loss
1. a network failure causes an outstanding drop in profits
  2. a network failure becomes avoidable
  3. a power failure brought about by the damage gets destructive
  4. people learn lessons from service interruptions

(問2) 下線部(カ)に含まれるダッシュ(一)にはどのような意味があるかを考え、その意味に最も近い1語を選んでその記号を解答欄にマークしなさい。

1. but
2. nevertheless
3. since
4. therefore

(問3) 本文の内容に基づいて、次の(A)(B)(C)の英文を完成させるのに最も適切な選択肢をそれぞれ1つ選び、その番号を解答欄にマークしなさい。

(A) The 75-year-old Georgian woman

- 1 can be put in jail because she destroyed the precious cable on purpose and was reported to the authorities
- 2 could be found guilty of chopping the fiber optic cable, which deprived many people of their use of the internet.
- 3 did not know where to dig to find the metal and accidentally found the damaged cable instead.
- 4 was just working hard to mine for metals when she was arrested on charges of obstructing the police

(B) OptaSense's sonar techniques can

- 1 change the signal into a comfortable sound to relax the users
- 2 identify the source of the approaching danger to the cable
- 3 offer continuous service by preventing a power shortage.
- 4 provide the users with an advanced sound system.

- (C) According to Alan Thomas, Hiscox insurance company
1. has accumulated enough data to design a policy
  2. is not willing to produce an insurance policy to cover network failure
  3. sells an insurance policy which is specifically designed for each customer
  4. will not use statistics to evaluate the risk unlike other companies.

(問4) 以下の(A)(B)(C)(D)について、本文の内容に最も近いものをそれぞれ1つ選び、その番号を解答欄にマークしなさい。

(A)

1. Among the companies researched by Avanti Communications, 20% thought they would not survive if they could not use the internet for a week.
2. Avanti Communications conducted a large-scale survey to find out the importance of the internet for individual users
3. Because of a 75-year-old Georgian woman, around half of Armenian internet users could not play online games on the weekend.
4. Hayastan Shakarian was an avid internet user herself although she had no idea how the service was brought to her

(B)

1. Avanti Communications believes that fiber optic cables can be more easily constructed than satellites
2. InTune Networks is a government-owned company, which is developing a new system to satisfy both IT experts and insurers
3. IT experts and insurance company policy makers both worry about the cost of maintaining satellites.
4. The reason only 10% of users in Armenia had internet access was because one old woman chopped the cable while trying to get copper.

(C)

1. Insurance companies have not been eager to sell policies covering losses brought about by network failures
2. Insurance companies regard network failures as insignificant because they are so rare
3. Insurance companies think a fiber optic cable network is more expensive to build, but is more stable
4. Insurance companies try to attract customers through new policies adjusted to the development of new technologies.

(D)

1. Although developers are trying hard to make a better internet system, it might not be safe from an unpredictable attack from copper diggers.
2. Businesses are reducing their dependence on the internet because of the possibility of power shortages
3. In the 1990's internet users were already enjoying social networking as we are today.
4. The internet of 30 years ago was much safer and more stable than today's because there were no hackers

(問5) 本文の内容に基づいて、以下の(A)(B)(C)(D)の質問の答として最も適切なものをそれぞれ1つ選び、その番号を解答欄にマークしなさい。

(A) What is Chris Kimm's opinion about the internet and business?

1. In the past the internet was just as important to business as it is today.
2. Internet providers should have an emergency backup system
3. It is virtually impossible to do business without the internet.
4. Some people conduct business without the internet.



(B) What is Geo's approach to prevent accidents?

1. To protect the cable with a metal case.
2. To put the cable deeper.
3. To put the cable higher.
4. To use a wireless system.

(C) What does David Williams of Avanti Communications think is one of the advantages of using satellites?

1. It is cheaper to create a wide-area network.
2. It is more secure than an optic fiber cable network.
3. It is faster than other network systems.
4. It is easier to build a backup system.

(D) What does Alan Thomas of Hiscox expect would increase his business?

1. An accident
2. Broadband internet connection
3. Corporate social responsibility.
4. Public relations.

(問6) 下線部(ア)を日本語に訳し、記述解答欄に記入しなさい。

(問7) 下線部(イ)の内容と最も近い意味を持つ連続した2語を本文中から抜き出し、記述解答欄に記入しなさい。

II 次の文章を読んで、以下の問に答えなさい。

Our projections onto animals are often entirely off the mark. We might judge an animal to be happy when we see an upturn of the corners of his mouth; such a “smile,” however, can be misleading. On dolphins, the smile is a fixed physiological feature, immutable like the creepily painted face of a clown\*. Among chimpanzees, a grin is a sign of fear or submission, the furthest thing from happiness

Similarly, a human might raise her eyebrows in surprise, but the eyebrow-raising capuchin monkey is not surprised. He is showing neither skepticism nor alarm; instead he is signaling to nearby monkeys that he has friendly designs. By contrast, among baboons a raised brow can be a deliberate threat.

When we assume we know what is best for an animal, we may be acting at cross-purposes with\* our aims. For instance, in the last few years there has been considerable to-do\* made about improved welfare of animals raised for food, such as broiler chickens who have access to the outside, or have room to roam in their pens. Though the end result is the same for the chicken — it winds up as someone’s dinner — there is a budding interest in the welfare of the animals before they are killed.

But do they want to range freely? Conventional wisdom holds that no one, human or not, *likes* to be pressed up against others. Anecdotes seem to confirm this: given the choice of a subway car jammed with hot, stressed commuters, and one with only a handful of people, we choose the latter in a second. But the natural behavior of chickens may indicate otherwise: chickens flock

Biologists devised a simple experiment to test the chickens’ preferences of where to be: they picked up individual animals, relocated them randomly within their houses, and monitored what chickens did next. What they found was that most chickens moved closer to other chickens, not farther away, even when there

was open space available. Given the option of space to spread their wings —  
they choose the jammed subway car

(7) This is not to say that chickens thus *like* being pressed against other birds in a cage, or find it a perfectly agreeable life. It is inhuman to pen chickens so tightly they cannot move. But it is to say that assuming resemblance between chicken preferences and our preferences is not the way to insight about what the chicken actually does like.

Do our anthropomorphic\* tendencies ever miss so fabulously with dogs? Without a doubt they do. Take raincoats. There are some interesting assumptions involved in the creation and purchase of tiny, stylish, four-armed raincoats for dogs. Let's put aside the question of whether dogs prefer a bright yellow coat, a tartan pattern, or a raining-cats-and-dogs motif. Many dog owners who dress their dogs in coats have the best intentions: they have noticed, perhaps, that their dog resists going outside when it rains. It seems reasonable to conclude from that observation that he *dislikes* the rain.

*He dislikes the rain*. What is meant by that? It is that he must dislike *getting the rain on his body*, the way many of us do. But is that a sound leap? In this case, there is plenty of seeming evidence from the dog himself. Is he excited and wagging when you get the raincoat out? That seems to support the leap — or, instead, the conclusion that he realizes that the appearance of the coat predicts a long-awaited walk. Does he flee from the coat? Curl his tail under his body and duck his head? It undermines the leap — though does not discredit it outright.

Here the natural behavior of related, wild canines\* proves the most informative about what the dog might think about a raincoat. Both dogs and wolves have, clearly, their own coats permanently affixed\*. One coat is enough: when it rains, wolves may seek shelter, but they do not cover themselves with natural materials. That does not argue for the need for or interest in raincoats. And besides being a jacket, the raincoat is also one distinctive thing: a close,

even pressing, covering of the back, chest, and sometimes the head. There are occasions when wolves get pressed upon the back or head: it is when they are being dominated by another wolf, or scolded by an older wolf or relative. Dominants often pin subordinates down by the snout\*. This is called muzzle\* biting, and accounts, perhaps, for why muzzled dogs sometimes seem quite subdued. And a dog who “stands over” another dog is being dominant. The subordinate dog in that arrangement would feel the pressure of the dominant animal on his body. The raincoat might well reproduce that feeling. So the principal experience of wearing a coat is not the experience of feeling protected from wetness; rather, the coat produces the discomfiting\* feeling that someone higher ranking than you is nearby.

This interpretation is borne out by most dogs' behavior when getting put into a raincoat: they may freeze in place as they are “dominated”. You might see the same behavior when a dog resisting a bath suddenly stops struggling when he gets fully wet or covered with a heavy, wet towel. The be-jacketed dog may cooperate in going out, but not because he has shown he likes the coat; it is because he has been subdued. And he will wind up being less wet, but it is we who care about the planning for that, not the dog. The way around this kind of misstep is to replace our anthropomorphizing instinct with a behavior-reading instinct. In most cases, this is simple: we must ask the dog what he wants. You need only know how to translate his answer.

出典：Alexandra Horowitz, *Inside of a Dog*

(一部省略・変更しました。)

注：clown：ピエロ

at cross-purposes with～：～と相反して，～と食い違つて

to-do：大騒ぎ，口論 anthropomorphic：擬人化された

canines：(オオカミ，キツネなどを含む)イヌ科の動物

affix：はりつける snout：鼻

muzzle：(名詞で)鼻面，鼻孔部 (動詞で)口輪をつける

discomfiting：当惑させる，不安にさせる

(問1) 下線部(ア)(エ)(カ)(キ)の内容に最も近いものをそれぞれ1つ選び、その番号を解答欄にマークしなさい。

(ア) off the mark

1. accurate
2. incorrect
3. natural
4. understandable

(エ) a sound leap

1. a good appearance
2. a healthy complexion
3. a reasonable insight
4. reliable evidence

(カ) pressing

1. colorful
2. light
3. tight
4. urgent

(キ) borne out

1. denied
2. dismissed
3. ignored
4. proved

(問2) 下線部(イ)(ウ)(オ)(ク)の内容に最も近いものをそれぞれ1つ選び、その番号を解答欄にマークしなさい。

(イ) he has friendly designs

1. he has a talent for communicating
2. he has supporters on his side
3. he intends to get along with others
4. he lacks good intentions

(ウ) they choose the jammed subway car

1. chickens like to venture outside their cages
2. chickens like to walk around on their own
3. chickens prefer open spaces to closed ones
4. chickens prefer to get close to each other

(オ) the appearance of the coat predicts a long-awaited walk

1. although he likes to go for a walk, he doesn't like the design of the coat
2. as soon as the coat is taken out, he can go out for a walk
3. because he loves the coat, he wants to show it off on walks outside
4. when it starts to rain, he has to wait for a while to go for a walk

(ク) The way around this kind of misstep

1. The key to avoiding this sort of error
2. The key to overcoming this type of unhappiness
3. The way not to fall on the walkway
4. The way to get friendly with animals

(問3) 本文の内容に基づいて、次の(A)(B)(C)の英文を完成させるのに最も適切な選択肢をそれぞれ1つ選び、その番号を解答欄にマークしなさい。

(A) When biologists experimented with chickens, they

1. crammed chickens into a very narrow place
2. let chickens wander freely inside their pens
3. put chickens outside their pens
4. set chickens free from their cruel conditions.

(B) The author thinks the reason many dog owners dress their dogs in raincoats is that

1. they prefer their dogs to wear fashionable coats.
2. they think their dogs would catch a cold without the coat
3. they think their dogs would like to dress as humans do.
4. they think their dogs would not want to get wet in the rain.

(C) Wearing a raincoat sometimes makes a dog feel subdued because

1. it causes him to feel dominated.
2. it satisfies his desire to wear it on the walk.
3. he likes the sense of protection it offers
4. he is relieved of the pressure from the dominant animal.

(問4) 以下の(A)(B)(C)について、本文の内容に最も近いものをそれぞれ1つ選び、その番号を解答欄にマークしなさい。

(A)

1. A baboon raises his eyebrows when he has nothing to worry about
2. A capuchin monkey raises his eyebrows when he is alerted
3. A chimpanzee smiles when he is extremely happy.
4. A dolphin's facial features remind us of a human smile.

(B)

1. Because chickens like to walk around, it is reasonable to give them much space
2. The recent trend to improve the conditions of animals is justified by the biologists' experiments.
3. To our regret, there has not been enough discussion on how to improve crowded conditions of chickens.
4. While chickens prefer to be close to each other, they still should be given minimum space.

(C)

1. It is quite easy for us human beings to understand what animals really want.
2. It is reasonable to conclude that there is little difference between humans and animals.
3. Our understanding of animals can be biased by our human-centered perspective
4. Recently, we humans have been showing less concern for the welfare of animals



Ⅲ 次の文章を読んで、以下の問に答えなさい。

Can students possibly learn more sitting alone, staring at a computer screen for hours on end than they could sitting amongst peers and interacting directly with an expert well versed in the subject at hand? Surprisingly, several studies, including one by the U.S. Department of Education, suggest that students are able to retain more and perform slightly better in an online setting than in a traditional one.

Anthony Adornato, director of communications at Syracuse University's Burton Blatt Institute, who has had experience as a traditional and online student, has been pleasantly surprised by his experiences learning online at the graduate level at the University of Missouri. "I have found the program, which is predominantly online, to be far more rewarding and fulfilling than I ever imagined," he says. "Having said that, I think there is a big difference between getting a master's degree online versus an undergraduate degree online. I don't think there is anything that could replace the 'traditional' college experience."

But for nontraditional students looking to pursue a degree of any type, having to study online should not be a deterrent, the studies suggest. The Department of Education study, revised in September 2010, analyzed more than 1,000 other studies of online education conducted since 1996. While the analysis found that students in a strictly online setting performed marginally better than in a classroom-only setting, it did not point to specific institutions or suggest that online programs are of a higher quality than traditional ones.

Ultimately, the quality of the instruction and the program itself, no matter what the means of delivery, will have the greatest effect on a student's performance and overall retention, according to Jay Caulfield, associate dean of Marquette University's College of Professional Studies. Other educators agree: "A well-designed online course offers opportunities in a rich learning environment," says Timothy S. Ely, assistant vice president for online education.

and instructional design at Pennsylvania's Harcum College. "The effectiveness, much like in a face-to-face classroom, depends, ultimately, on the engagement and commitment of the instructor."

The Department of Education's analysis pointed to blended learning — a combination of online and in-class instruction — as the most effective teaching method, which has since been echoed by the findings of Mac Loudon, a professor of medicinal chemistry at Purdue University, who once doubted the effectiveness of online coursework. Loudon examined the performance of 226 organic chemistry\* students in fall 2009. Those that engaged in online homework on top of their class lectures and textbook homework had a full-grade higher average than their peers who studied without the aid of the online tool.

Loudon, who authored the textbook but had no hand in the creation of the online material, checked to see if the students who did the extra work online were more driven, or perhaps better students overall, but found no correlation between their organic chemistry grades and those they'd previously received in general chemistry. "Students are highly engaged when they work online because they get instant feedback," he says. "The degree of benefit surprised me — I hate to admit it. The study convinced me of something that I didn't believe would happen."

While Loudon was pleased with the results and plans on using the online homework for future classes, he is wary of limiting or eliminating in-class interactions with students, claiming the students would be hurt by the lack of spontaneous question and answer sessions and problem solving. Beyond that, career experts note that while students might be able to learn well online, they'll miss out on developing interpersonal skills that are critical to meshing in any professional setting. "In a work environment, face-to-face interaction and communication is crucial to success, and therefore the more ( A ) one has interacting in professional situations face to face, the more ( B ) a person

becomes," says Matt Eventoff, a communication strategist with Princeton Public Speaking

出典：'Your Professor, Your Computer, and You', by Brian Burnsed, *US News and World Report* (一部省略・変更しました。)

注：organic chemistry：有機化学

(問1) 下線部(ア)(イ)(ウ)(エ)(オ)(カ)(キ)の内容に最も近いものをそれぞれ1つ選び、その番号を解答欄にマークしなさい。

(ア) on end

1. continuously
2. devotedly
3. finally
4. repeatedly

(イ) well versed in

1. who is indifferent to
2. who is interested in
3. who knows a lot about
4. who knows nothing about

(ウ) deterrent

1. benefit
2. discouragement
3. incentive
4. opportunity

(工) Ultimately

1. At its best
2. In this case
3. In the end
4. Nevertheless

(才) had no hand in

1. had no investment in
2. had no opposition to
3. was not involved in
4. was not satisfied with

(力) driven

1. dissatisfied
2. indifferent
3. motivated
4. reluctant

(キ) critical to meshing

1. important to getting along with other people
2. irrelevant to communication
3. necessary for leading other people
4. useless to finding success

(問2) 本文の内容に基づいて、次の(A)(B)(C)の英文を完成させるのに最も適切な選択肢を1つ選び、その番号を解答欄にマークしなさい。

(A) The US Department of Education found that

1. online students performed better than traditional students.
2. online students performed the same as traditional students.
3. online students performed worse than traditional students
4. the results varied according to the type of questions.

(B) Anthony Adornato thinks that

- 1 his experience of learning online was not so successful
- 2 it is unnecessary to keep the traditional method of instruction.
- 3 online learning is better than he anticipated
- 4 online learning is effective enough to eliminate the traditional method.

(C) The most effective method of education the U.S. Department of Education has found is

1. blended learning.
2. classroom-only instruction.
3. face-to-face instruction
- 4 online learning

(問3) 以下の(A)(B)について、本文の内容に最も近いものをそれぞれ1つ選び、その番号を解答欄にマークしなさい。

(A)

1. According to several studies, online learning is more effective for students to improve their computer skills
2. Anthony Adornato believes that traditional learning is still necessary for college students
3. Anthony Adornato proposes to introduce online learning at the undergraduate level as soon as possible.
4. The US Department of Education encourages educators to adopt online learning in place of traditional instruction.

(B)

1. According to Timothy S. Ely, a student's performance depends on the quality of instruction whether it is online or traditional
2. Jay Caulfield and Timothy S. Ely have different opinions concerning online and class-centered education.
3. Jay Caulfield believes a student's performance is dependent upon his ability to retain knowledge.
4. Students who receive both an online and a traditional education are more successful in finding a job

(問4) 本文中の(A)(B)に入れるのに最も適切な組み合わせを1つ選び、その番号を解答欄にマークしなさい。

1. (A) experience                      (B) experienced
2. (A) experienced                      (B) experience
3. (A) experience                      (B) experiencing
4. (A) experiencing                      (B) experienced