

I. Read the text and answer the questions below.

この部分に記載されている文章については、
著作権法上の問題から記載することができません。

出典：Scientific American, 2010.5.21. <http://www.scientificamerican.com> より一部改変

1. Translate the underlined sentence into Japanese.

2. Choose the most appropriate word to fill in ①—⑥.

- | | | | | |
|---|-----------------|---------------|-------------------|-------------|
| ① | A. regarded as | B. grown into | C. called for | D. based on |
| ② | A. taken | B. known | C. worn | D. worked |
| ③ | A. raises | B. weighs | C. stores | D. sums |
| ④ | A. service | B. awareness | C. resources | D. products |
| ⑤ | A. triggered | B. intervened | C. appointed | D. deleted |
| ⑥ | A. an advantage | B. issue | C. responsibility | D. the risk |

3. Choose the most appropriate title for the text.

- A. Cancers caused by food
- B. Cancers at work places
- C. Cancers caused by the environment
- D. The decrease of cancers

II. Read the text and answer the questions below.

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著作権法上の問題から記載することができません。

出典 : *Scientific American*, John Matson, 2010.5.19. <http://www.scientificamerican.com> より一部改変

1. Choose the most appropriate word to fill in ①—⑥

- | | | | | |
|---|------------------|--------------|---------------|--------------|
| ① | A. loss | B. re-entry | C. highlight | D. launch |
| ② | A. island | B. business | C. population | D. family |
| ③ | A. considered | B. designed | C. undergone | D. justified |
| ④ | A. pressure | B. precision | C. control | D. access |
| ⑤ | A. plane | B. power | C. submarine | D. craft |
| ⑥ | A. demonstrating | B. catching | C. overcoming | D. expecting |

2. According to the text, which of the following statements is true?

- A. Two other spacecraft have already succeeded in solar sailing technology.
- B. IKAROS will go beyond Venus if the new system works well.
- C. IKAROS uses only traditional solar power to move in the space.
- D. The way the sail catches the photons is different from the way a yacht sail catches the wind.

3. Choose the main idea of the text.

- A. The Japanese space agency had a hard time in developing the solar-sailing IKAROS.
- B. The Japanese space agency is set to make history with the solar-sailing IKAROS.
- C. IKAROS has a strong sail to make the space journey successful.
- D. IKAROS will reach Venus in as early as six months.

III. Choose the most appropriate word from A-H to match the definitions ①—⑥.

- ① able to withstand wear, pressure, or damage
- ② to make a liquid thinner or weaker by adding water or another solvent to it
- ③ to check that something is true or accurate
- ④ the tools or other pieces of equipment that are needed for a particular activity or task
- ⑤ happening regularly
- ⑥ a division of a number

A.	apparatus	B.	dilute	C.	durable	D.	fraction
E.	opaque	F.	periodic	G.	standardize	H.	verify

IV. Read the text and answer the questions below.

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出典 : *Scientific American*, Charles Q. Choi, 2010.5.17. <http://www.scientificamerican.com>

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1. Choose the most appropriate word to fill in ①—④.
A. for B. on C. to D. with

2. Choose the most appropriate clause to fill in [X].
A. researchers would prefer that these machines somehow harvest energy from their hosts
B. scientists have trouble finding a doctor to implant a similar device without a compelling medical reason
C. researchers claim that medical equipment implanted in our bodies undergoes rigorous testing before it is put inside a person
D. scientists have demonstrated that this implant is potentially one that is appropriate for humans

V. Read the text and answer the questions below.

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出典 : *Scientific American*, Sandra A. Swanson, 2010.5.17. <http://www.scientificamerican.com>

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1. Choose the most appropriate word to fill in (イ) - (ニ) .
A. accommodate B. damage C. happen D. turn

2. Choose the most appropriate clause to fill in ①-④.
A. a lot of cybersecurity efforts have focused on securing the bulk transmission system
B. one smart-meter worm could infect a community and potentially shut off power
C. the company needs to make sure the network connection to that home is secure
D. a smart grid also poses several potential security problems