平成 20 年度　大学院博士(前期)課程入学者選抜学力試験

英　　語

[90 分]

注 意 事 項

1. 試験開始の合図があるまで, この問題冊子を開かないでください.

2. 問題は 1 ページから 5 ページにあります. ページ番号のついていない紙は下書き用紙です.

3. 解答用紙は 2 枚に分かれているので, すべての解答用紙の所定欄に受験番号と氏名をはっきりと記
   入してください.

4. 下書き用紙 2 枚が解答用紙と一緒にあります.

5. 試験中に問題冊子の印刷不明瞭, ページの落丁・乱丁および解答用紙の汚れ等に気がついた場合は,
   静かに手を上げて監督員に知らせてください

6. 試験終了後, 問題冊子および下書き用紙は持ち帰ってください.

7. .設問ごとに配点が記されています

PART 1: Reading comprehension

Read the article below and answer the following questions.

Google searches web's dark side

One in 10 web pages scrutinised by search giant Google contained malicious code that could infect a user's PC.

Researchers from ①the firm surveyed billions of sites, subjecting 4.5 million pages to "in-depth analysis". About 450,000 were capable of launching so-called "drive-by downloads", sites that install malicious code, such as spyware, without a user's knowledge. A further 700,000 pages were thought to contain code that could ②compromise a user's computer, the team report. To address the problem, the researchers say the company has "started an effort to identify all web pages on the internet that could be malicious".

Phantom sites

Drive-by downloads are an increasingly common way to infect a computer or steal sensitive information. They usually consist of malicious programs that automatically install when a potential victim visits a booby-trapped website.

"To ③entice users to install malware, adversaries employ social engineering," wrote Google researcher Niels Provos and his colleagues in a paper titled The Ghost In The Browser. "The user is presented with links that promise access to 'interesting' pages with explicit pornographic content, copyrighted software or media. A common example are sites that display thumbnails to adult videos."

④The vast majority exploit vulnerabilities in Microsoft's Internet Explorer browser to install themselves. Some downloads, such as those that alter bookmarks, install unwanted toolbars or change the start page of a browser, are an annoyance. But increasingly, criminals are using drive-bys to install keyloggers that steal login and password information. Other pieces of malicious code hijack a computer turning it into a "bot", a remotely controlled PC.

Drive-by downloads represent a shift away from traditional methods of infecting a computer, such as spam and email attachments.

Attack plan

As well as characterising the scale of the problem on the net, the Google study analysed the main methods by which criminals inject malicious code on to innocent web pages. ⑤It found that the code was often contained in those parts of the website not designed or controlled by the website owner, such as banner adverts and widgets. Widgets are small programs that may, for example, display a calendar on a webpage or a web traffic counter. These are often downloaded form third party sites.

⑥The rise of web 2.0 and user-generated content gave criminals other channels, or vectors, of attack, it found. For example, postings in blogs and forums that contain links to images or other content could unwittingly infect a user.

The study also found that gangs were able to hijack web servers, effectively taking over and infecting all of the web pages hosted on the computer. In a test, the researchers' computer was infected with 50 different pieces of malware by visiting a web page hosted on a hijacked server.

The firm is now in the process of mapping the malware threat. Google, part of the StopBadware coalition, already warns users if they are about to visit a potentially harmful website, displaying a message that reads "this site may harm your computer" next to the search results. "Marking pages with a label allows users to avoid exposure to such sites and results in fewer users being infected," the researchers wrote.

However, the task will not be easy, they say. "Finding all the web-based infection vectors is a significant challenge and requires almost complete knowledge of the web as a whole," they wrote.

(from http://news.bbc.co.uk/2/hi/technology/6645895.stm , words intact, but discrete sentences edited into paragraphs.)

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Questions: Reading Comprehension

1. What does ①the firm indicate? Choose the best one from the following.   (4 points)
   a. malicious code   b. Google   c. web pages scrutinised   d. user's PC

2. What does ②compromise mean? Choose the best one from the following.   (4 points)
   a. be in between   b. secure   c. give and take   d. endanger

3. What does ③entice mean? Choose the best one from the following.   (4 points)
   a. attract   b. prevent   c. enforce   d. explore

4. What does ④The vast majority indicate? Choose the best one from the following.
                                                                      (4 points)
   a. most of the PC users   b. most of the drive-by downloads
   c. most of the operating systems   d. most of the "interesting" websites

5. What does ⑤it indicate? Choose the best one from the following.   (4 points)
   a. the scale of the problem   b. the methods to inject malicious code
   c. the Google study   d. the characteristics of the criminals

6. Judge true or false each statement below, according to the text.
                                                  (5 points each = total 30 points)

   1) The research team, headed by Niels Provos, found that about 10% of the
   websites possibly contained malicious code.

   2) Ways to spread malicious code have shifted from spam to exploiting e-mail
   attachments.

3) Web criminals have developed various ways to inject malicious code into innocent websites.

4) The most serious types of damage caused by drive-by downloads are altering bookmarks, installing unwanted toolbars or changing the start page of a browser.

5) Some of the criminal techniques for hijacking web servers are so sophisticated that even the researcher's computer was once infected by malware.

6) Google will sell downloadable anti-virus software.

7. Translate the underlined part ⑥ into Japanese. (20 points)

PART 2: Academic Skills

Answer the following questions about the research described in the article.

1. What was the goal of the study mentioned in the text? Answer in English within 20-40 words. (12 points)

2. What are the results of the survey and the conclusion of the researchers? Write a summary in English within 40-80 words. (18 points)