Exam revision — Unit 9 Security

_____

It identifies a user and prepares

_____ OR _____

Key security threat types

Hacking

_____

Interception

_____

Data theft

Prevention methods

Passwords

_____

_____

Compression

_____ compression results in reduction of data quality following compression

_____compression results in no loss of data quality following compression

Compression ratio= _____

Data _____

_____ =

Detects and blocks attacks by

_____ scanning all files

_____ =

Blocks programs accessing the Internet and

_____

Other protection methods:

1=

2=

3=

Think about...

Exam revision — Unit 9 Security

Malware	Describes software used to _____
IP spoofing	Is an _____ of a user, device or client on the Internet. It's often used during a cyberattack to _____

Protecting software during design, creation and testing

1. Buffer overflows

1. _____
2. Scripting restrictions

1. Accepting parameter without _____

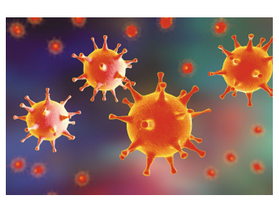
Ways to identify vulnerabilities

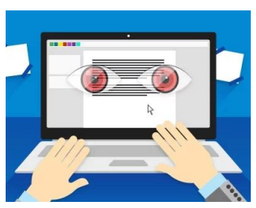
_____ is a method of interrogating resources on the Internet for information about systems, looking to discover what a potential attacker can also discover without an organisation's knowledge

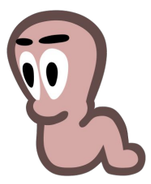
Penetration testing	Attempting to penetrate a system's _____ _____ in order to demonstrate security risks.

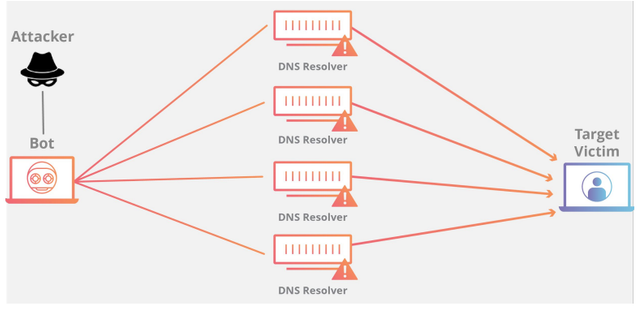
Threats

A _____ Is similar to a virus but is a standalone program that replicates itself in order to spread to other computers. It does not need a vector.	SQL injection is the placement of malicious code in SQL statements, via web page input. SQL injection usually occurs when you ask a user for input and an SQL statement that you will **unknowingly** run on your database.	The attacker usually sends excessive messages asking the network or server to authenticate requests that have invalid return addresses. Its aim is to temporarily disrupt services and keep a server busy.	A virus is a computer program that is able to copy itself onto other programs often with the intention of maliciously damaging data. A virus is transmitted by 'piggybacking' on another program known as a 'vector'.	_____ are covert programs that capture keyboard (or other input device) input and transmit this data to a third party or hold the data for collection.	A method of stealing personal information by getting people to click on a link in an email that downloads malware on to a device. Common examples include bank emails, prize giveaways or access to a resource	Social engineering is the act of tricking someone into divulging information or taking action, usually through technology. The idea behind social engineering is to take advantage of a potential victim's natural tendencies and emotional reactions.









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Key security threat types

Hacking
_____
Interception
_____
Data theft

Data _____

_____ _____

Anti virus will_____

_____

_____

Firewall =

Blocks_____

_____ and

_____

Prevention methods

Passwords

_____

_____

Other protection methods:

1=

2=

3=

Think about...

Internet cookies

Is a small piece of _____ that is given by a

_____ to a _____

1. _____ to save login information

1. They hold personal information and this can be _____ or _____ and tracking cookies can hold information on the websites visited by users

Compression

_____ compression results in reduction of data quality following compression

_____compression results in no loss of data quality following compression

Compression ratio=

B M

2 F A

U

P S

Exam revision — Unit 9 Security

Malware	Describes software used to _____
IP spoofing	Is an _____ of a user, device or client on the Internet. It's often used during a cyberattack to _____

Protecting software during design, creation and testing

1. Buffer overflows
1. _____
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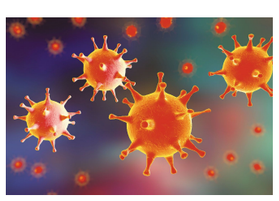

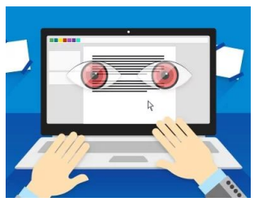

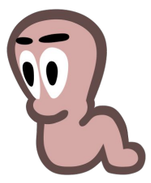

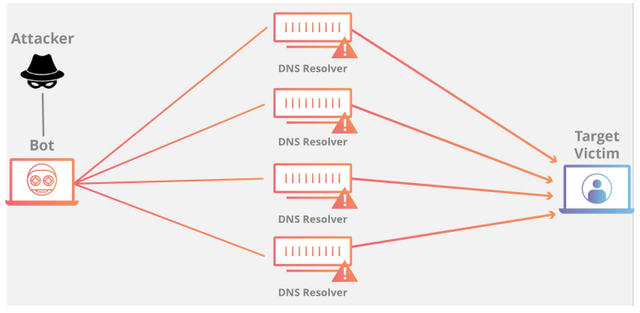

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Cyber security is essential in the protection against different types of malware.

(a) Describe **two** methods of protection against the use of key loggers. [4]

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(b) Describe **two** characteristics of a computer virus. [2]

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A lossy algorithm is used to compress a sound file whose original file size was 540 KB.

(i) Describe how a lossy algorithm would compress the sound file. [2]

.....

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(ii) Following compression, the sound file size is reduced to 54 KB. Calculate the compression ratio. [2]

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.....

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(b) A virus checker aims to prevent malicious damage. Identify **three** typical functions carried out by this software. [3]

Function 1 .....

.....

Function 2 .....

.....

Function 3 .....

.....

(c) State the role of a firewall. [1]

.....

.....

(d) Identify **three** typical functions of a firewall. [3]

Function 1 .....

.....

Function 2 .....

.....

Function 3 .....

.....