

Name:

## Internet Security Questions

- 1) Explain the difference between symmetric and asymmetric encryption

Symmetric key uses the same key for encrypting and decrypting a message, asymmetric encryption uses different keys

- 2) Write down the steps for sending a digital signature

- 1) Apply a hash (one way encryption), to the message, to produce the message digest
- 2) Encrypt the message digest, using the sender's private key and an asymmetric encryption algorithm  $E$  to produce the digital signature,  $S$ .
- 3) Append the signature to the original message and encrypt using the receiver's public key to produce the cyphertext  $C$  to be sent.

- 3) Explain the difference between Worms, Trojans and Viruses

Worms spread without the need for human agency, where as viruses require human intervention to spread. Trojans allow a hacker to gain unauthorised access to your computer and to take control of it

- 4) Explain how antivirus software works

Antivirus regularly performs scans the computer, looking for files that match the contents of its database which contains a library of known malware. When malware has been identified it is quarantined.