**Level 1**

1. Multiple
   1. Type of encryption that replaces multiple characters by others to encrypt a text sequence
   2. Substitution Cypher works as a way to communicate using the alphabet in order to provide a description.
   3. Substitution Cypher works as a way to communicate using the alphabet in order to provide a description.

|  |  |
| --- | --- |
| defend the east wall of the castle | giuifg cei iprc tpnn du cei qprcni |

|  |  |
| --- | --- |
| abcdefghijklmnopqrstuvwxyz | abcdefghijklmnopqrstuvwxyz |

1. Multiple

**Level 2**

1. Multiple
   1. Morse code is a method for transmitting telegraphic information using a standardized sequence of short and long elements to represent many kinds of letters, numbers, punctuation and characters.
   2. It can be transmitted in a number of ways, it originated from electrical pulses from telegraph wires and a radio signals with short and long tones.
   3. It uses dots and dashes in order to replace different letters.
2. Multiple
   1. The shortest code is either the letters t or e. They are usually the most frequently used letters, the shorter code will become a dot.
   2. The longest codes are the letters which consists of 4 dots or dashes. These are the letters which are the least used letters in the alphabet.
   3. The benefit of having a variable length code, you will not have to type a long message to send long sentences or phrases.

**Level 3**

1. Multiple
   1. Each computer has a secret key that it can be used to encrypt a packet of information before it is sent over to the other computer within the network. The Symmetric-key required that you know which types of computers will be talking to each other in which they Symmetric key will be installed in each one.
   2. The code provides the key to decoding the message so the viewer will know what It means.
2. Multiple
   1. DES is the first major symmetric algorithm developed for computers in the United States which was approved for use in the 1970s and used a 56-bit key which offers more than 70 quadrillion possible combinations.
   2. The AES is an encryption code which uses either 128, 192 or 256bit keys. This replaced DES as the Advanced Encryption Standard uses higher bit keys and consist over quadrillions or even more of combinations.
3. The Asymmetric-key encryption, public-key encryption uses two different types of keys at once. It uses a combination of a private and a public key. The private key is only available to your computer while the public key is given by your computer to many other kinds of computer and is communicated securely within it.
4. Multiple
   1. The Hash Value is a value that is computed from a base input number using a hashing algorithm. The hash value is the summary of the original value and one of the most important factors about the hash value is that it is nearly impossible to derive the original input number without knowing the data which is being used to create the hash value.
   2. The Hash Value is used to encrypt messages by being multiplied by the input number and then the new number becomes the new encoded number.
   3. The hash value is used to decrypt the message with a hash value and then you must divide the encoded message with the hash value in order to decode the message.
   4. Public keys generally use complex algorithms and very large hash values for encrypting which includes 40 bit or high bit numbers like 128bit. A 128bit has 2128  combinations.
5. Multiple
   1. Public keys generally use complex algorithms and very large hash values for encrypting which includes 40 bit or high bit numbers like 128bit. A 128bit has 2128  combinations.
   2. SSL is a type of internet security protocol used by internet browsers and many web servers to transmit sensitive information
   3. A digital certificate is a unique piece of code or a large number that says that the web server is trusted by the independent source which is known as certificate authority. This