**A5 Software and hardware security measures**

Add more rows to tables below where needed

**Antivirus**

1. What is the definition of antivirus software?
2. Explain how it is used to detect threats?
3. What are the three options antivirus software can carry out? Explain them

**Firewall**

1. What is a firewall? And name the types of firewall.
2. What is the difference between a hardware firewall and software firewall? Suggest what firewall would be best to use in a scenario of your choosing.
3. Provide the different techniques that firewalls use to filter data below:

|  |  |
| --- | --- |
| **Type of method** | **Explanation of method** |
|  |  |

**NAT**

1. What is network translation? Why is it needed?

**Authentication**

1. What is authentication?
2. What is the difference between authentication and authorisation?
3. Complete the table about the types of authentication

|  |  |
| --- | --- |
| **Type of authentication** | **Description of authentication type** |
| Biometric authentication |  |
| Two-Step Verification |  |
| Security tokens |  |
| Knowledge –Based authentication |  |
| Kerberos –Network authentication |  |
| Certificate based authentication |  |
| Digital certificates & Certificate authorities |  |

**Encryption**

1. What is encryption?
2. What is asymmetric encryption and symmetric encryption?
3. How is encryption used within DRM?
4. Complete the table below:

|  |  |
| --- | --- |
| **Type of encryption** | **Description** |
| VPN |  |
| TOR |  |
| Digital certificates |  |
| HTTPS |  |

**Trusted Computing**

What is trusted computing? Why is it used? Give examples of trusted computing

**Wireless Precautions**

1. Explain what network cloaking is and how can you implement this.
2. Explain mac address filtering and how is this setup.
3. What are the types of wireless encryption? And which is more secure?
4. Explain why it is not best practice to use WPS?
5. Identify at least three methods of best practice to mitigate the use of cracking router passwords

**Consideration of Issues during design**

1. What key areas should be focused on when design a networking and why?