We can discover different security vulnerabilities when doing the pen test of the web site. To discover and prevent any potential vulnerability, pen test is necessary before a web site goes live.

According to TestingXperts (2020), there are 5 reasons why pen test is important:

1. Meet the compliance requirements: There are different regulations and standards, depending on the nature of the web site. In our case, pen test can help us to test whether the web site meets the standards like PCI-DSS and HIPPA, whether it meets the latest compliance or not.
2. Maintaining the confidentiality of data, protect the organisation's revenue and goodwill. If we fail to protect the consumers' data confidentiality, and cause any data breach, there is a face of the organisation to face the legal consequences and reputation. Any security attack may also affect the account records, and even the revenue of the organisation, which means the loss of money.
3. To verify the security settings of the web site: Pen tests and reports help systems administrators verify whether the security measures which have been applied to the web site, are effective or not. The advice and helps security operators and experts to identify if there is any improvement to secure the web site perfectly.
4. Deployment of Pen test also gives a chance to train the network administrators. Through the pen test, network operators and able to recognise different types of cyber-attack and how to response. Also, a pen test is a good chance to testify the knowledge of staffs after training, by testing their sensitivity and effectiveness. For example, if the pen test can compromise any system, but there is no attention from the staffs, it means the training cannot help the staffs to monitor the networks and systems effectively from any potential security threat.
5. Testing the deployment of new technology: As the hardware and software always be updated nowadays, from firewalls' firmware to the server OS and applications, pen tests able prove whether these new technologies are safe or not, also can let the system administrator to recognise what are the potential security vulnerabilities of these new hardware and software.