Adding a special character before the character/string to avoid it being misinterpreted is known as \_\_\_\_\_\_\_\_\_.

The standard organization responsible for the Internet of Things is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

Input validation means data is syntactically and \_\_\_\_\_\_\_\_\_ correct.

\_\_\_\_\_\_\_hacker performs all the breaking activities with the permission of the owner/organization.

Semantically correct user provided input means, it is in correct \_\_\_\_\_\_\_.

Penetration Testers are hackers who attack organizations without organizations' permission.

DSL, ISDN and X.21 are the examples of circuit switched networks.

Broken authentication weaknesses allow attackers to use manual or automatic ways to gain control over any account in a system and even gain total control.

Answer any five (5) of the following acronyms, in the space provided. Write the full words of the acronym. For full marks, the words must be spelled correctly (1 mark). Then, in one sentence, describe the function\ purpose or description of the acronym. (1 mark)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **DoS** | **IoT** | **XSS** | **SLA** | **SDLC** | **CSMA/CA** | **WPA2** |

**Answer any two (2) of the following questions. Provide enough detail to earn 6 marks. If you answer more than 2, only the first 2 will be marked. Use proper sentences, grammar, and spelling. Each question is worth 6 marks. (12 Marks)**

1. What is MAC spoofing and IP spoofing (Smurf attack)? Discuss how these attacks can be prevented?
2. Suppose you are working from home and to access some of the resources from the head office of your company you want a secure connection. Discuss some of the techniques that can be used to create a secure connection between your home office and the head office.
3. What is input sanitization? How can a mobile application avoid unauthorized access to the resources at the server using the input sanitization method?
4. Explain the methodology a hacker uses to break into a network. Include in your answer the definition of hacking.

What is the network IP of the host having and IP address of 195.17.32.76/26?

The frame sent to the access point from the iPad. But the iPad forwarded the same frame to the access point again. Why did it happen?

The minimum frame size must be \_\_\_\_\_\_ bytes for transmission.

To avoid collision CSMA/CA uses \_\_\_\_\_ strategies.

There are \_\_\_\_\_\_MAC address fields in wireless frame is:

A good time to create a bug board is during \_\_\_\_\_\_\_\_\_\_ stage.

A switching technique where every fragment or packet of a larger message is routed to the destination independent of each other is:

"If the wireless frame transmission fails, then the maximum number of times the station attempt to retransmit is set to \_\_\_\_\_\_\_."

If the frame size is 1522 bytes then there are \_\_\_\_\_\_\_bytes if header and trailer bits.

What kind of switching is it where prior to the transmission of packet a dedicated path is established, so all the packets follow the same path?