

## WEEK 4 ESSAY QUESTIONS

Instructions: Answer all questions in a single document. Then submit to the appropriate assignment folder. Each response to a single essay question should be about a half-page in length (about 150 words).

1. Communications within a computer network rely on numerous components for data to traverse from the initial sender of a message or file to the receiver at the distant end of the communication path. In addition to the media that the data travels across, the devices that guide the data packets through the network, and the protocols that establish end-to-end connectivity and negotiate the communication, network services play a critical role in providing the necessary addressing and name resolution services. Describe the following services and their role in network communications: ARP, DHCP, ICMP, SNMP, and DNS.
2. Modern organizations rely on the Internet for information and research necessary to stay competitive but this access can come with significant risk if they don't take the necessary steps to safeguard their internal resources from outside attackers. In this week's reading, various types of firewalls and firewall configurations were discussed. Describe the terms bastion host, DMZ, dual-homed firewall, screened host, and screened subnet and their roles in firewall architectures.
3. Many organizations employ a mobile workforce and/or provide the option of telework to their employees to allow them to work from home. In both situations, a secure means of accessing the corporate network remotely must be provided. Discuss the four main tunneling protocols used to provide virtual private network access between remote users and their corporate network.