1) Can you provide a brief overview of vulnerability scanning techniques and their importance in cybersecurity? What is the primary objective of conducting vulnerability scans within an organization's IT infrastructure?

Answer: Vulnerability scanning be accomplished using a Scanner such as Nessus. This is important in cybersecurity because these scans could notify you of potential vulnerabilities in your network. The primary objective of this is to proactively remediate any known vulnerabilities on your network.

2) What are the key differences between active and passive vulnerability scanning techniques? When is it appropriate to use each approach, and what are the advantages and limitations of each method?

Answer: Active scanning is when the scan is directly communicating with a network/ system endpoint. Passive scanning is less invasive and does not interact with endpoints. You would use passive scanning when utilizing scheduled scans on your network. The advantage of Active scanning is that is gives your security team more info when actively threat hunting.