Answers To Interview Questions:

1. **Open port:** A port accepting connections (e.g., port 80 for web traffic).
2. **TCP SYN scan:** Nmap sends SYN packets; open ports reply with SYN-ACK.
3. **Risks:** Unauthorized access, exploits, data breaches.
4. **TCP vs UDP:** TCP is connection-oriented; UDP is stateless (use -sU in Nmap).
5. **Secure ports:** Use firewalls, disable unused services, update software.
6. **Firewall role:** Blocks/allows traffic based on port rules.
7. **Port scan purpose:** Attackers map networks to find vulnerabilities.
8. **Wireshark use:** Inspects raw packets to validate scan results.