

Society for Promotion of Vocational & Technical Education [SOVTECH]

Recruitment for the Post of Network Administrator (SDC)

Date of Examination: 04/01/2025

Exam Time: 11:50 AM - 12:20 PM

Exam Slot: A6

ANSWER KEY

#	Question	Answer Key	Remarks
1	<p>In a router, the "Routing Table" is used to:</p> <p>A. Define the types of traffic allowed to pass through the router. B. Store all the IP addresses for the devices in the network. C. Determine the best path to forward packets to their destination. D. Provide access control for incoming and outgoing traffic.</p>	C	
2	<p>..... was the first step in the evolution of Ethernet from a coaxial cable bus to a hub-managed, twisted pair network:</p> <p>A. Star LAN B. Ring LAN C. Mesh LAN D. All of the above</p>	A	
3	<p>Which of the following is true about IPv6?</p> <p>A. IPv6 uses 32-bit addresses. B. IPv6 is backward compatible with IPv4. C. IPv6 eliminates the need for NAT due to its large address space. D. IPv6 is only used for routing packets within local networks.</p>	C	
4	<p>The unspecified address of an IPv6 address is equivalent to the IPv4 unspecified address 0.0.0.0:</p> <p>A. (::1) B. (::) C. (::0) D. (1::)</p>	B	
5	<p>A firewall is installed at the point where the secure internal network and untrusted external network meet, which is also known as:</p> <p>A. Choke point B. Meeting point C. Firewall point D. Secure point</p>	A	
6	<p>..... is used to protect data and passwords:</p> <p>A. Encryption B. Authentication C. Authorization D. Non-repudiation</p>	A	
7	<p>Which NAT configuration requires the use of both NAT and PAT to allow multiple internal devices to share a single external IP address?</p> <p>A. Static NAT B. Dynamic NAT C. Overloading (Port Address Translation - PAT) D. Bidirectional NAT</p>	C	

8	<p>Which of the following is an advantage of using NAT in a network?</p> <p>A. NAT can enhance security by hiding internal network IP addresses. B. NAT allows the use of larger public IP address space. C. NAT can eliminate the need for firewalls in a network. D. NAT makes it easier to trace the origin of a packet.</p>	A	
9	<p>A WAN typically spans a set of countries that have data rates less than Mbps:</p> <p>A. 2 B. 1 C. 4 D. 100</p>	A	
10	<p>Which of the following is not a mechanism that DHCP supports for IP address allocation?</p> <p>A. Automatic allocation B. Static allocation C. Dynamic allocation D. Manual allocation</p>	D	
11	<p>What is the function of the ARP (Address Resolution Protocol)?</p> <p>A. Maps an IP address to a MAC address. B. Maps a MAC address to an IP address. C. Translates IP addresses between IPv4 and IPv6. D. Provides IP address assignments.</p>	A	
12	<p>IEEE 802.3ab defines Gigabit Ethernet transmission over unshielded twisted pair (UTP) category 5, 5e, or 6 cabling known as:</p> <p>A. 1000 BASE-T B. 1000 BASE-SX C. 1000 BASE-LX D. 1000 BASE-CX</p>	A	
13	<p>..... is responsible for converting higher-level protocol addresses (IP addresses) to physical network addresses:</p> <p>A. Address Resolution Protocol (ARP) B. Reverse Address Resolution Protocol (RARP) C. Bootstrap Protocol (BOOTP) D. Internet Control Message Protocol (ICMP)</p>	A	
14	<p>A data communication system within a building or campus is:</p> <p>A. MAN B. LAN C. WAN D. None of these answers</p>	B	
15	<p>In the context of NAT, which statement best describes the difference between Static NAT and Dynamic NAT?</p> <p>A. Static NAT maps a private IP address to a public IP address dynamically, whereas Dynamic NAT uses a fixed translation. B. Static NAT provides a permanent mapping, while Dynamic NAT uses a pool of public IP addresses for translation. C. Static NAT is used for routing, while Dynamic NAT is used for security purposes. D. Static NAT is more scalable than Dynamic NAT in large networks.</p>	B	

16	<p>State true or false:</p> <p>i) SOCKS are a standard for circuit-level gateways.</p> <p>ii) NAT is used for a small number of hosts in a private network.</p> <p>A. True, False B. False, True C. True, True D. False, False</p>	A	
17	<p>The layer is responsible for resolving access to the shared media or resources:</p> <p>A. Physical B. MAC sub-layer C. Network D. Transport</p>	B	
18	<p>The following protocols and systems are commonly used to provide various degrees of security services in computer networks:</p> <p>i) IP filtering ii) Reverse Address Translation iii) IP Security Architecture (IPsec) iv) Firewalls v) SOCKS</p> <p>A. i, ii, iii, and iv only B. i, iii, iv, and v only C. ii, iii, iv, and v only D. All i, ii, iii, iv, and v</p>	A	
19	<p>Which of the following is an example of a Layer 3 device in the OSI model?</p> <p>A. Hub B. Switch C. Router D. Bridge</p>	C	
20	<p>A network topology where each device is connected to a central hub or switch is called:</p> <p>A. Star topology B. Ring topology C. Bus topology D. Mesh topology</p>	A	
21	<p>Which of the following is true about the process of port address translation (PAT) in NAT?</p> <p>A. Each internal IP address gets a unique external IP address. B. Multiple internal IP addresses share a single external IP address, with different port numbers. C. PAT is a form of static NAT. D. None of these answers</p>	B	
22	<p>..... mode is used whenever either end of a security association is a gateway:</p> <p>A. Tunnel B. Encapsulating C. Transport D. Gateway</p>	A	
23	<p>DNS can obtain the of a host if its domain name is known and vice versa:</p> <p>A. Station address B. IP address C. Port address D. Checksum</p>	B	

24	<p>Which of the following are the solutions to network security?</p> <p>i) Encryption ii) Authentication iii) Authorization iv) Non-repudiation</p> <p>A. i, ii, and iii only B. ii, iii, and iv only C. i, iii, and iv only D. All i, ii, iii, and iv</p>	D	
25	<p>TCP/IP layer corresponds to the OSI model's three layers:</p> <p>A. Application B. Presentation C. Session D. Transport</p>	A	
26	<p>In the IEEE standards, 802.5 standards is also called:</p> <p>A. Token Ring B. Ethernet C. Wireless Token Area Network D. Token Bus</p>	A	
27	<p>Match the following IEEE numbers to their corresponding names for IEEE 802 standards for LANs:</p> <p>i) 802.3 ii) 802.11 iii) 802.15.1 iv) 802.16</p> <p>A. i-b, ii-c, iii-d, iv-a B. i-c, ii-d, iii-a, iv-b C. i-c, ii-a, iii-d, iv-b D. i-b, ii-d, iii-c, iv-a</p>	C	
28	<p>The most important and common protocols associated with the TCP/IP internetwork layer are:</p> <p>i) Internet Protocol (IP) ii) Internet Control Message Protocol (ICMP) iii) Bootstrap Protocol (BOOTP) iv) Dynamic Host Configuration Protocol (DHCP) v) Address Resolution Protocol (ARP)</p> <p>A. i, ii, iii, and iv only B. i, iii, iv, and v only C. ii, iii, iv, and v only D. All i, ii, iii, iv, and v</p>	D	
29	<p>Which of the following is the predominant form of Fast Ethernet, and runs over two pairs of category 5 or above cable?</p> <p>A. 100 BASE-T B. 100 BASE-TX C. 100 BASE-T4 D. 100 BASE-T2</p>	B	

30	Which of the following is a limitation of NAT when used in IPv6 environments? A. IPv6 does not support NAT at all. B. IPv6 uses NAT to translate between private and public addresses. C. NAT in IPv6 leads to security vulnerabilities due to its translation mechanisms. D. IPv6 is unable to allocate a sufficient number of IP addresses for NAT to work effectively.	A	
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