1. How would you express 15 in binary (base 2)? — 1 point

- ( ) 01001
- (•) 01111
- ( ) 10000
- ( ) 01010

2. How many octets are used to define the network portion of the IP address in a Class A network? — 1 point

- ( ) 2
- ( ) 0
- (•) 1
- ( ) 3

3. The device used to separate the network portion of an IP address from the host portion is called what? — 1 point

- ( ) The address filter.
- ( ) The network separation filter.
- (•) The subnet mask.
- ( ) The host mask.

4. The IP header contains a time-to-live (TTL) value. How is this value expressed? — 1 point

- ( ) The number of seconds a packet may live if not delivered.
- (•) The number of Layer 3 devices (hubs, routers, etc.) the packet is allowed to pass through before it is dropped.
- ( ) The number of delivery attempts that may be made before the packet is returned to the source address as undeliverable.
- ( ) The number of minutes a packet may live if it is not delivered.

5. Which is the host portion of this IP address 192.168.52.3/24? — 1 point

- ( ) 192.168.52
- ( ) 24
- ( ) 168.52.3
- (•) 3

6. Which network mask belongs to a Class C network? — 1 point

- ( ) 255.255.255.255
- ( ) 255.0.0.0
- (•) 255.255.255.0
- ( ) 0.0.0.0

7. Which IPv4 addressing schema would you use to send a message to all systems on the network? — 1 point

- ( ) Multicast
- ( ) Unicast
- ( ) Simulcast
- (•) Broadcast

8. Which three (3) of the following are legitimate IPv6 addressing schemas? — 1 point

- [x] Anycast
- [ ] Broadcast
- [x] Multicast
- [x] Unicast

9. True or False: Utilities such as TFTP, DNS and SNMP utilize the TCP transport protocol. — 1 point

- ( ) True
- (•) False

10. Which two (2) of these fields are included in a UDP header? — 1 point

- [ ] Source IP Address
- [ ] Destination IP Address
- [x] Destination Port
- [x] Source Port

11. Which four (4) of these are characteristic of the TCP transport protocol? — 1 point

- [ ] Connectionless
- [x] Connection-oriented
- [x] Reliable
- [x] Ordered data; duplicate detection
- [ ] Unreliable
- [x] Flow control

12. How does an endpoint know the address of the DNS server? — 1 point

- ( ) The endpoint sends out a DNS Discover broadcast request to all endpoints on the local network.
- (•) It is manually configured in the network settings by the administrator or obtained from the DHCP server.
- ( ) The endpoint sends an inquiry to the gateway and the gateway responds with the address of the DNS server.
- ( ) The DNS server is always located on the gateway.

13. What is the primary function of DHCP? — 1 point

- ( ) To automatically assign MAC addresses to systems.
- ( ) To collect host names present on a local network segment.
- (•) To automatically assign IP addresses to systems.
- ( ) To translate domain names to IP addresses and vice versa.

14. Which Syslog layer handles the routing and storage of a Syslog message? — 1 point

- ( ) Syslog Content
- ( ) Syslog Message
- ( ) Syslog Transport
- (•) Syslog Application

15. Which of the following flow data are gathered by utilities such as NetFlow? — 1 point

- ( ) Packet count and byte count.
- ( ) Source and destination TCP/UDP ports.
- ( ) Source and destination IP addresses.
- ( ) Routing and peering data such as TCP flags and protocol.
- (•) All of the above.

16. When a network interface card in operating in promiscuous mode, what action does it take? — 1 point

- (•) The NIC sends all packets to the CPU for processing instead of only those packets indicated for its MAC address.
- ( ) The NIC sends out one false, or "promiscuous" packet for every legitimate packet it sends to interfere with eavesdropping operations.
- ( ) The NIC filters out dangerous or "promiscuous" packets.
- ( ) The NIC forwards promiscuous packets to the Promiscuous Server.

17. If a packet is allowed to pass through a NGFW based upon the established firewall rules and a new session is established, how does the NGFW treat the next packet it encounters from the same session? — 1 point

- ( ) The subsequent packets are inspected based on session-specific rules, not the packet-specific rules that were used to inspect the first packet in the session.
- ( ) Every packet is inspected and allowed or denied based upon the same firewall rules that applied to the first packet.
- (•) Subsequent packets of the same session are automatically allowed.
- ( ) Subsequent packets that arrive within the Session Interval configured for that firewall will be allowed to pass without inspection. The first packet that arrives after the session interval expires will trigger the creation of a new session.

18. If your nontechnical manager told you that you must configure your next generation firewalls (NGFW) to block all users on your network from posting messages on Facebook from their office computers, what would be the consequence of carrying out his order? — 1 point

- ( ) You would have to block all HTTP traffic from entering or leaving your network.
- ( ) You would have to block all social media access from your network.
- ( ) You would have to block all access to Facebook from your network.
- (•) No serious consequence, application-level inspection and blocking can be configured.

19. Monitoring network traffic and comparing it against an established baseline for normal use is an example of which form of intrusion detection? — 1 point

- ( ) Traffic Impact Analysis
- ( ) Traffic Variance Analysis
- ( ) Signature-based detection
- (•) Statistical anomaly-based detection

20. Which are three (3) characteristics of a highly available system? — 1 point

- [x] Redundancy
- [ ] Geographically dispersed
- [ ] Independence
- [x] Failover
- [x] Monitoring

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