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## Free CCNA Routing & Switching Exam Practice Test

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With the free CCNA practice test, you can methodically prepare for your CCNA certification exam with ease. Take the CCNA exam questions and identify which areas of the Cisco switching and routing concepts you are well-versed in and which areas need work. This CCNA test is for those who prefer to map their progress. This CCNA 200 practice exam can be taken multiple times and is free of cost. If you are someone who prefers to take an exam well-prepared, then these CCNA practice exam is for you! Give it a shot today!

### Explanations

**60**

Questions

**2**

Correct Answers

**3.33**

% Correct Answers

1. Which of the following protocol negotiates the formation of an EtherChannel?

L2TP

- EIGRP
- HTTP
- PAgP

Explanations:

Answer: d. Explanation: Port Aggregation Protocol (PAgP) can negotiate the formation of an EtherChannel.

---

2. Which of the following is NOT an option to establish an EtherChannel?

- Link aggregation with access ports.
- Link aggregation combining FastEthernet and GigabitEthernet links.
- Using a negotiation protocol.
- Link aggregation with trunk ports.

Explanations:

Answer: b. Explanation: All underlying links must be the same speed" is correct. Since FastEthernet and GigabitEthernet links are not the same speed, option b is incorrect.

---

3. Which of the following is NOT a port role in Common Spanning Tree Protocol?

- Designated
- Blocking
- Root
- Alternate

Explanations:

Answer: d. Explanation: Alternate is not a port role in Rapid Spanning Tree Protocol.

---

4. Which of the following can lead to network failure?

- Configuration BPDUs
- Broadcast storm
- Slow LACP negotiation
- Failure to establish an EtherChannel

Explanations:

Answer: b. Explanation: Broadcast storms can lead to network failure by consuming CPU and bandwidth resources.

---

5. The ----- is the interface on a switch with the lowest root path cost.

- Port path
- Designated port
- Root path
- Root port

Explanations:

Answer: d. Explanation: The root port is the interface on a switch with the lowest root path cost.

---

6. Which of the following is NOT a valid configurations for the ip default-network command?

- ip default-network 192.168.10.0
- ip default-network 172.16.25.0
- ip default-network 126.0.0.0

ip default-network 12.0.0.0

Explanations:

Answer: b. Explanation: The ip default-network command requires a classful network; 172.16.25.0 is not a classful network.

---

7. Which of the following MAC address type becomes part of the running configuration?

Dynamic secure

Sticky static

Static dynamic

Sticky secure

Explanations:

Answer: d. Explanation: Sticky secure MAC addresses become part of the running configuration.

---

8. Which of the following is NOT one of the 3 Ps of applying ACLs?

one ACL per protocol

one ACL per address

one ACL per interface

one ACL per direction

Explanations:

Answer: b. Explanation: The 3 Ps are one ACL per protocol, per direction, per interface.

---

9. Switch latency includes the time spent in all but which of the following activities?

- Receiving the frame on an interface.
- Processing the frame.
- Performing the Power-on Self-Test.
- Forwarding the frame out an interface.

Explanations:

Answer: c. Explanation: The Power-on Self-Test is performed when the switch boots, not during switch latency.

---

10. Outbound ACLs process packets -----.

- when they arrive on the outgoing interface.
- after they have been routed to the next device.
- when they are received on the interface.
- before they have been routed to the next device.

Explanations:

Answer: d. Explanation: Outbound ACLs process packets before they have been routed to the next device.

---

11. ACEs in an access list should be entered in order of -----.

- More to less specific
- Destination address
- In then out
- Device number

Explanations:

Answer: a. Explanation: ACEs in an access list should be entered in order of more to less specific.

---

12. Standard access lists should be applied as close to the ----- as possible.

- source address
- destination address
- interface
- switch

Explanations:

Answer: b. Explanation: Standard access lists should be applied as close to the destination address as possible.

---

13. An inside local address is -----.

- A public address referencing an inside device.
- A private address referencing an inside device.
- A public address referencing an outside device.
- A private address referencing an outside device.

Explanations:

Answer: b. Explanation: An inside local address is a private address referencing an inside device.

---

14. Use the image given to answer the following question. Which negotiation protocol, if any, was used to create the trunk?

- LACP

- PAgP
- none
- DTP

Explanations:

Answer: c. Explanation: The output specifies mode as on; this indicates no negotiation was used.

---

15. Use the image given to answer the following question. Which STP could not have been configured on this switch?

- PVST
- CST
- PVRST
- MST

Explanations:

Answer: b. Explanation: Common Spanning Tree (CST) creates one spanning tree for all VLANs. The output indicates that there are 3 VLANs, but only 2 are forwarding. This can only happen with a per-VLAN or per-VLAN list STP.

---

16. Use the image given to answer the following question. How many VLANs are on switch S2?

- 3
- 2
- 4
- unknown

Explanations:

Answer: d. Explanation: This command only shows those VLANs allowed on the trunk; there could be more configured on the switch that are not allowed on this trunk.

---

17. Use the image given to answer the following question. Which VLAN ID is the native VLAN?

99

1

10

20

Explanations:

Answer: a. Explanation: The first line of output specifies Native VLAN 99.

---

18. If only IPv6 routing is used, which of the following commands is required for OSPFv3?

router-ID

no shutdown

ipv6 summary-address ospf

ipv6 network

Explanations:

Answer: a. Explanation: The router-ID command in router configuration is required to start OSPFv3 if only IPv6 routing is used.

---

19. A(n) ----- must be configured before Telnet or SSH is used to reach the device.

EtherChannel

- VLAN
- IP address
- Default gateway

Explanations:

Answer: c. Explanation: Until an IP address is configured, only a console connection can be used to access a Cisco device.

---

20. Which type of cable is used to connect two PCs?

- rollover
- straight through
- crossover
- RJ-45

Explanations:

Answer: c. Explanation: A crossover cable is used to connect two PCs.

---

21. Which Cisco device would probably have more FastEthernet interfaces?

- Router
- Firewall
- Buffer
- Switch

Explanations:

Answer: d. Explanation: Switches provide connectivity to end devices using Ethernet interfaces.

---

22. By default, the OSPF dead interval is set to ----- times the hello interval.

- 4
- 2
- 5
- 6

Explanations:

Answer: a. Explanation: The dead interval is set to 4 times the hello interval by default.

---

23. In Frame Relay, the Frame Relay switch is the ----- device.

- BE
- DLCI
- DCE
- DTE

Explanations:

Answer: c. Explanation: In Frame Relay, the Frame Relay switch is the DCE device.

---

24. Use the image given to answer the following question. PC A initiates a file transfer with PC B. The Layer 2 destination address used to send this information to PC B is -----.

- The MAC address of PC B
- The IP address of PC B
- The MAC address of the router's Fa0/0 interface

- The MAC address of S2's Fa0/1 interface

Explanations:

Answer: a. Explanation: The destination address used to send this information to PC B is the MAC address of PC B because it is on the same subnet.

---

25. Use the image given to answer the following question. PC D sends an email to PC B. The Layer 2 destination address used to send this information to PC B is -----.

- The MAC address of PC B
- The IP address of PC B
- The MAC address of the router's Fa0/1 interface
- The MAC address of S3's Fa0/1 interface

Explanations:

Answer: c. Explanation: The destination address used to send this information to PC B is the MAC address of the router's Fa0/0 interface since PC B and PC D are on different subnets.

---

26. Use the image given to answer the following question. PC A sends an email to PC B. The Layer 3 destination address used to send this information to PC B is -----.

- The MAC address of PC B
- The IP address of PC B
- The IP address of the router's Fa0/0 interface
- The IP address of S2's Fa0/1 interface

Explanations:

Answer: b. Explanation: The destination address used to send this information to PC B is the IP address of PC B.

---

27. Use the image given to answer the following question. S2 receives Layer 2 frames with a MAC destination address of an S2 interface. What type of datagram meets this criteria?

- A Layer 2 frame sent to PC A or PC B.
- A Layer 3 packet sent from PC A or PC B to a destination beyond the subnet.
- An STP BPDU
- A Layer 2 frame sent from PC A or PC B.

Explanations:

Answer: c. Explanation: A Spanning Tree Protocol Bridge Protocol Data Unit (STP BPDU) is the only datagram that would be addressed directly to an S2 interface

---

28. Which OSI layer is responsible for user interaction?

- Layer 2
- Layer 5
- Layer 6
- Layer 7

Explanations:

Answer: d. Explanation: Layer 7 is responsible for user interaction.

---

29. A(n) ----- is responsible for packet forwarding.

- router
- switch

- hub
- end device

Explanations:

Answer: a. Explanation: A router is responsible for packet forwarding.

---

30. All the routers in an OSPF area have identical LSDBs in the ----- link state.

- exstart
- init
- exchange
- full

Explanations:

Answer: d. Explanation: All the routers in an OSPF area have identical LSDBs in the full link state.

---

31. One of the Layer 2 Ethernet sublayers are -----.

- 802.3 MCI
- CSMA/CD
- TCP
- 802.2 LLC

Explanations:

Answer: d. Explanation: The Layer 2 Ethernet sublayers are 802.3 Media Access Control (MAC) and 802.2 Logical Link Control (LLC).

---

32. An example of an adjacent-layer interaction is -----.

- sending an email
- encapsulation at Layer 3 when a segment is received
- a DNS lookup
- a DHCP request

Explanations:

Answer: b. Explanation: An example of an adjacent-layer interaction is encapsulation at Layer 3 when a segment is received. It involves 2 adjacent layers on the same device.

---

33. The address 2.1.45.255/8 is a ----- address.

- host
- private
- broadcast
- APIPA

Explanations:

Answer: c. Explanation: The address 2.1.45.255/8 is a broadcast address.

---

34. Use the image given to answer the following question. This is an example of a-----.

- syslog message
- SNMP message
- NetFlow message
- severity level 2

Explanations:

Answer: a. Explanation: This is an example of a syslog message.

---

35. Use the image given to answer the following question. The mnemonic portion of the message is -----.

- 256
- Serial1/1
- CHANGED
- LINK

Explanations:

Answer: c. Explanation: The mnemonic portion of the syslog message is CHANGED.

---

36. Use the image given to answer the following question. This message is generated when the ----- command is issued.

- shutdown
- no shutdown
- show ip interface
- vlan 22

Explanations:

Answer: a. Explanation: This message is generated when the shutdown command is issued.

---

37. IPv4 addresses are split into ----- main classes.

- 10
- 3
- 2
- 15

Explanations:

Answer: b. Explanation: IPv4 addresses are split into 3 main classes; A, B, and C.

---

38. An example of a classful network is -----.

- 177.24.0.0/24
- 10.2.0.0/16
- 223.1.1.1/24
- 55.0.0.0/8

Explanations:

Answer: c. Explanation: An example of a classful network is 223.1.1.1/24.

---

39. The number of usable host addresses on a subnet with mask 255.255.255.240 is ----.

- 32
- 30
- 16
- 14

Explanations:

Answer: d. Explanation: The number of usable host addresses on a subnet with mask 255 255 255 240 is

Answer: a. Explanation: The number of usable host addresses on a subnet with mask 255.255.255.2 is  $2^4$  minus 2 equals 14.

---

40. The show ip flow export command is used to verify ---- .

- DHCP
- NetFlow
- IPsec
- NAT

Explanations:

Answer: b. Explanation: The show ip flow export command is used to verify NetFlow.

---

41. When a PC needs to send a packet to a destination outside of its own subnet, it sends the packet to the -----.

- Default gateway
- DHCP
- Switch
- ARP

Explanations:

Answer: a. Explanation: When a PC needs to send a packet to a destination outside of its own subnet, it sends the packet to the default gateway.

---

42. The decimal number 27 is expressed in hexadecimal as ----- .

- 0B

- 01
- 1C
- 1B

Explanations:

Answer: d. Explanation: Decimal 27 is binary 0001 1011 which is 1B.

---

43. To enter privileged exec mode, enter the \_\_\_\_\_ command.

- enable
- disable
- shutdown
- no shutdown

Explanations:

Answer: a. Explanation: To enter privileged exec mode, enter the enable command.

---

44. To show the configuration that has been saved, enter the -----command.

- show running-config
- show enable-config
- show startup-config
- show config

Explanations:

Answer: c. Explanation: To show the configuration that has been saved and will be loaded at the next boot, enter the show startup-config command.

---

45. The command `ip route 10.1.1.0 255.255.255.0 fa0/0` is an example of -----.

- static routing
- default route
- quad zero
- dynamic routing

Explanations:

Answer: a. Explanation: The `ip route` command is an example of static routing.

---

46. Issue the ----- command to check ----- before issuing a debug command.

- show processes; routing table problems
- show debug; NAT problems
- show debug; static route problems
- show processes; CPU utilization

Explanations:

Answer: d. Explanation: Issue the `show processes` command to check CPU utilization before issuing a debug command.

---

47. The IP address 64.0.0.1 can be expressed in hexadecimal as -----.

- 6000000401
- 1000006001
- 4000000001
- 4000000001

400000001

Explanations:

Answer: c. Explanation: The IP address 64.0.0.1 can be expressed in hexadecimal as 400000001.

---

48. In a SOHO environment, the ----- device acts as a DHCP server and client.

- Switch
- Firewall
- PC
- All-purpose

Explanations:

---

49. The medium used for wireless communications is -----.

- copper
- fiber
- air
- mist

Explanations:

Answer: c. Explanation: The medium used for wireless communications is air.

---

50. Which of the following is not IGP?

- EIGRP

- EGP
- RIP
- OSPF

Explanations:

Answer: b. Explanation: Exterior gateway protocol (EGP) is not an interior gateway protocol (IGP).

---

51. Which of the following is a category of IGP?

- link-state
- distance vector
- SPF
- enhanced distance vector

Explanations:

Answer: c. Explanation: The Shortest Path First Algorithm (SPF) is used in link-state IGPs.

---

52. An EGP routes ----- autonomous systems.

- within
- around
- throughout
- between

Explanations:

Answer: d. Explanation: An exterior gateway protocol (EGP) routes between autonomous systems.

---

53. Which of the following is not a type of LMI?

- ietf
- cisco
- ansi
- q933a

Explanations:

Answer: a. Explanation: ietf is a type of Frame Relay encapsulation, not an LMI.

---

54. Which of the following is not a routing source?

- Connected routes
- Static routes
- ISATAP
- Routes learned by using dynamic routing protocols

Explanations:

Answer: c. Explanation: The Intrasite Automatic Tunnel Address Protocol (ISATAP) is not a routing source.

---

55. Which is the next router encountered when the packet leaves the egress interface?

- next hop
- default gateway
- static
- link-state

Explanations:

Answer: a. Explanation: The next hop is the next router encountered when the packet leaves the egress interface.

---

56. On which of the following was the DLCI defined?

- A switch interface
- A router interface
- A router subinterface
- A switch subinterface

Explanations:

Answer: c. Explanation: The DLCI was defined on a router subinterface.

---

57. Use the image given to answer the following question. What is the Layer 2 address of this interface?

- DLCI 302
- There is no Layer 2 address in Frame Relay.
- point-to-point DLCIs have no IP address
- Serial0.302

Explanations:

Answer: a. Explanation: The DLCI is the Layer 2 address in Frame Relay.

---

58. Use the image given to answer the following question. Which parameter ensures that this DLCI can pass routing protocol information?

- DLCI
- active
- broadcast
- up

Explanations:

Answer: c. Explanation: The broadcast parameter ensures that this DLCI can pass routing protocol information, since the latter requires multicast.

---

59. Use the image given to answer the following question. Binary 11000001 is expressed in hexadecimal form as ----.

- 193
- A3
- C1
- 1

Explanations:

Answer: c. Explanation: Binary 11000001 is 1100 0001 which is expressed in hexadecimal form as C1.

---

60. In a SOHO environment, ----subnet(s) are normally used.

- 2
- 1
- 0
- 3

Explanations:

Answer: b Explanation: In a SOHO environment, one subnet is normally used.

## FAQs

**What is the CCNA practice test?**

The CCNA practice test is free of cost is a simulation of the actual CCNA routing and switching exam. This practice test consists of 60 MCQs that are based on the CCNA exam questions, which must be answered in a duration of 90 minutes. The main aim of this practice test is to help candidates in identifying concepts they are well-versed in and the areas they need to work on.

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