1.Which statement correctly differentiates between static and dynamic routing?

a. Static routing is more scalable than dynamic routing and is commonly used in large networks.

b. Static routing requires manual configuration of routes and is more flexible than dynamic routing.

c. Dynamic routing protocols automatically adapt to network changes and require less administrative overhead than static routing.

d. Dynamic routing protocols use predetermined routes that do not change, whereas static routing protocols calculate optimal paths based on network conditions.

The correct answer is:

c. Dynamic routing protocols automatically adapt to network changes and require less administrative overhead than static routing.

2. What does the ipconfig / renew command do in a Windows operating system?

a. It releases the current IP address configuration.

b. It flushes and resets the contents of the DNS client resolver cache.

c. It displays the full TCP/IP configuration for all adapters.

d. It renews the IP address lease for all network adapters.

The correct answer is:

d. It renews the IP address lease for all network adapters.

3. What is the purpose of creating VLANs with separate IP subnets?

a. To prioritize specific types of traffic over others.

b. To logically segment the network into broadcast domains.

c. To reduce the number of IP address in the network.

d. To increase the number of available IP addresses.

The correct answer is:

b. To logically segment the network into broadcast domains.

4. A network engineer is configuring an 802.1Q trunk between two switches. The engineer has decided to use VLAN 200 as the native VLAN. The engineer sends a frame with a VLAN ID of 300.

How will this frame be sent over the trunk link?

a. The frame will be sent without a VLAN tag.

b. The frame will be sent with a double VLAN tag.

c. The frame will be dropped.

d. The frame will be sent with a VLAN tag.

The correct answer is:

d. The frame will be sent with a VLAN tag.

5. RIP is a distance vector routing protocol?

a. True

b. False

The correct answer is:

a. True

6. What is the administrative distance of RIP ?

a. 140

b. 90

c. 120

d. 110

The correct answer is:

c. 120

7. What protocol is utilized by the Ping utility for testing network connectivity?

a. TCP

b. DHCP

c. ICMP

d. ARP

The correct answer is:

c. ICMP (Internet Control Message Protocol)

8. RIP is an Interior Gateway Protocol (IGP)?

a. False

b. True

The correct answer is:

b. True

9. What is the application we have used in our practical to configure the cisco devices?

a. Wireshark

b. CH341 Driver

c. CMD

d. Putty

The correct answer is:

d. Putty

10. Which of the following switch port can transmit multiple VLAN traffic?

a. access port

b. trunk port

c. both of them

d. None of them

The correct answer is:

b. Trunk port

11. Which of the following is a disadvantage of VLANs?

a. They increase the size of broadcast domains.

b. They do not support quality of service (QOS).

c. They require a router to communicate between VLANS.

d. They are difficult to set up and manage.

The correct answer is:

c. They require a router to communicate between VLANs.

12. Which command is used to display VLAN information on a Cisco switch?

a. show interface trunk

b. show vlan brief

c. show vlan status

d. display vlan

The correct answer is:

b. show vlan brief

13. Which is not true about RIPv2 ?

a. Support authentication of messages

b. Support routes with variable length subnet mask (VLSM)

c. Updates are sent as broadcast to all hosts in the network

d. Support classless networks

The correct answer is:

c. Updates are sent as broadcast to all hosts in the network

14. What is the difference between a VLAN and a subnet?

a. VLANs operate at Layer 2, while subnets operate at Layer 3.

b. VLANs are used for wired networks, while subnets are used for wireless networks.

c. VLANs can only be configured on routers, while subnets can be configured on switches.

d. VLANs are physical networks, while subnets are logical groupings of devices

The correct answer is:

a. VLANs operate at Layer 2, while subnets operate at Layer 3.

15. Which of the following is NOT typically provided by a DHCP server?

a. Default gateway

b. IP address and subnet mask

c. DNS Server Address

d. Routing protocol used

The correct answer is:

d. Routing protocol used

16. What setting should be checked on a PC if it's not obtaining an IP address from the DHCP server?

a. Ensure the PC's firewall is turned off

b. Ensure the PC's network adapter is disabled.

c. Ensure the PC is set to obtain an IP address automatically.

d. Ensure the PC is set to use a static IP address.

The correct answer is:

c. Ensure the PC is set to obtain an IP address automatically.

17. You need to assign FastEthernet 0/1 to Vian 10 in a switch, what will be the commands you will provide to complete this task?

a. Switch(config)winterface fastEthernet 0/1

Switch(config-if) #switchport mode access

Switch(config-if)#switchport mode access vian 10

b. Switch(config)#interface gigabitEthernet 0/1

Switch(config-if) #switchport access

Switch(config-if) #switchport access vlan 10

c. Switch(config)#interface fastEthernet 0/1

Switch(config-if) #switchport mode access

Switch(config-if)#switchport access vlan 10

d. Switch(config)#interface fastEthernet 0/1

Switch(config-if) #switchport access mode

Switch(config-if)#switchport access vian 10

The correct answer is:

c. Switch(config)#interface fastEthernet 0/1
Switch(config-if) #switchport mode access
Switch(config-if)#switchport access vlan 10

18. A network has 10 VLANs. Each VLAN has 20 hosts. If each host sends 10 broadcasts per hour, how many broadcasts does a host receive in an hour if VLANs are implemented?

a. 1990

b. 200

c. 190

d. 2000

The correct answer is:

c. 190

19. Which of the followings are the major benefits of implementing VLAN? Choose any three.

a. It increases the size of the collision domain

b. It enhances network security

c. It breaks down a single broadcast domain into multiple broadcast domains

d. It allows the logical grouping of users by functions

The correct answers are:

b. It enhances network security
c. It breaks down a single broadcast domain into multiple broadcast domains
d. It allows the logical grouping of users by functions

20. Scenario: You are a network administrator for a company. One day, you start receiving complaints from users that they are unable to access the company's internal website via its domain name, but they can access it using the IP address. You suspect there might be an issue with the DNS configuration.

Question: What could be the possible cause of this issue?

a. The website is down

b. The IP address of the website has changed, but the DNS server still has the old IP address cached.

c. The DNS server IP address configured on the client machines is incorrect.

d. The DHCP server is not functioning properly.

The correct answer is:

b. The IP address of the website has changed, but the DNS server still has the old IP address cached.

21. Which command is used to make a port as a trunk port in cisco switch?

a. switchport mode trunk

b. switchport enable mode trunk

c. port mode trunk

d. switchport enable trunk

The correct answer is:

a. switchport mode trunk

22. In a switch PCs are connected to vlan 10 and vlan 20. Same vlan PCs can communicate with each other. In order to have the communication between both of those vlans, what is required?

a. A switch with an access link that is configured between the switches

b. A switch with a trunk link that is configured between the switches

c. A router with an IP address on the physical interface connected to the switch

d. A router with sub-interfaces configured on the physical interface that is connected to the switch

The correct answer is:

d. A router with sub-interfaces configured on the physical interface that is connected to the switch

23. Consider two routers A and B, A and B are connected with each other with an ethernet cable, router A connected to PC1 and router B connected to PC2 by using ethernet cables. In this scenario how many networks are involved?

a. 4

b. 2

c. 3

d. 1

The correct answer is:

c. 3

24. What does the edit filter option in Packet Tracer allow you to do?

a. Alter the layout of the network topology

b. Change the properties of a network device

c. Change the simulation speed

d. Modify the properties of a captured packet

The correct answer is:

d. Modify the properties of a captured packet

25. What are the different modes available on a Cisco device for configuration and management?

a. Normal mode, Privilege mode, Administrator mode

b. User mode, Operation mode, Global configuration mode

c. User mode, Privilege mode, Global configuration mode

d. Basic mode, Advanced mode, Expert mode

The correct answer is:

c. User mode, Privilege mode, Global configuration mode

26. If you want to find the number of routers between a source and destination, the utility to be used is _____

a. routetrace

b. traceroute

c. Ipconfig

d. foute

The correct answer is:

b. traceroute

27. In a network with VLANs, each VLAN typically corresponds to:

a. A separate IP subnet.

b. A specific MAC address range.

c. A unique physical interface on a router.

d. A dedicated DNS server

The correct answer is:

a. A separate IP subnet.

28. What is the function of the Native VLAN in an 802.1Q trunk?

a. It carries traffic for all VLANs.

b. It carries untagged traffic.

c. It does not carry any traffic.

d. It carries traffic for a specific VLAN.

The correct answer is:

b. It carries untagged traffic.

29. What is the maximum number of VLANs that can be supported on a switch that uses 802.1Q?

a. 128

b. 1024

c. 4096

d. 512

The correct answer is:

c. 4096

30. Which command is used to create a VLAN on a Cisco switch?

a. vian [vlan_id)

b. vlan create [vlan_id)

c. vlan add [vlan_id]

d. switchport vlan [vlan_id]

The correct answer is:

b. vlan [vlan_id]

31. What is the command to configure a DHCP pool on a Cisco router?

a. ip dhep set POOL-NAME

b. ip dhcp pool POOL-NAME

c. ip dhcp group POOL-NAME

d. ip dhcp config POOL-NAME

The correct answer is:

b. `ip dhcp pool POOL-NAME`

32. What does the 255.255.255. e subnet mask mean?

a. It allows for 2048 hosts in the network.

b. It allows for 254 hosts in the network.

c. It allows for 1024 hosts in the network.

d. It allows for 510 hosts in the network.

33. A PC is connected to a rebooted/new router directly with a perfectly working ethernet cable. the port is not light up in the router. That is because,

a. Router will not support ethernet cable

b. Default gateway given in the PC and the interface IP address given in the router are different

c. By default, router ports are administratively down so, we need to manually up them.

d. No IP Address given in the PC

The correct answer is:

c. By default, router ports are administratively down so, we need to manually up them.

34. What is the purpose of Inter-VLAN routing?

a. To allow communication between hosts on the same VLAN

b. To prevent communication between hosts on different VLANS.

c. To prevent communication between hosts on the same VLAN.

d. To allow communication between hosts on different VLANS.

The correct answer is:

d. To allow communication between hosts on different VLANS.

35. A network engineer is configuring an 802.1Q trunk between two switches. The engineer has decided to use VLAN 100 as the native VLAN. The engineer sends a frame with a VLAN ID of 100. How will this frame be sent over the trunk link?

a. The frame will be dropped.

b. The frame will be sent with a double VLAN tag.

c. The frame will be sent with a VLAN tag.

d. The frame will be sent without a VLAN tag.

The correct answer is:

d. The frame will be sent without a VLAN tag.

36. Consider a network with multiple switches. Switch A is configured with VLAN 10, 20, and 30. Switch B is configured with VLAN 20, 30, and 40. Switch C is configured with VLAN 10, 30, and 40. All switches are interconnected using 802.1Q trunk links.

Now, consider the following statements. Which of the below statements is NOT correct?

a. A device in VLAN 30 on Switch B can communicate with a device in VLAN 30 on Switch C without the need for a router.

b. A device in VLAN 20 on Switch A can communicate with a device in VLAN 20 on Switch B without the need for a router.

c. A device in VLAN 40 on Switch B can directly communicate with a device in VLAN 40 gn Switch C.

d. A device in VLAN 10 on Switch A can directly communicate with a device in VLAN 10 on Switch C.

The correct answer is:

c. A device in VLAN 40 on Switch B can directly communicate with a device in VLAN 40 on Switch C.

37. What could be a reason if a PC's IP address is not within the range of the given IP addresses after configuring the subnet and DHCP?

a. The PC is configured with a static IP address.

b. Both A and C

c. The PC is turned off

d. The DHCP server is not functioning correctly.

The correct answer is:

b. Both A and C

38. In a newly set up network in Packet Tracer, the initial ping from a client to a server failed, but after a few attempts, it started working properly. What could be the reason for this?

a. The Address Resolution Protocol (ARP) was in the process of resolving the IP address to a MAC address.

b. The DHCP server was not functioning properly.

c. The server was down when the initial ping was attempted.

d. The client computer was not properly connected to the network due to DHCP establishment delay.

The correct answer is:

a. The Address Resolution Protocol (ARP) was in the process of resolving the IP address to a MAC address.

39. What happens if two devices in different VLANs have IP addresses within the same subnet?

a. They cannot communicate with each other

b. Their traffic is prioritized by the router

c. The switch automatically assigns new IP addresses

d. They can communicate without any issues.

The correct answer is:

a. They cannot communicate with each other.

40. What is the main purpose of "router on a stick" (ROAS) configuration in a network?

a. To create VLAN trunks between switches for inter-VLAN communication.

b. To configure a router as a DHCP server for VLANs.

c. To configure multiple physical routers for redundancy.

d. To enable a router to route traffic between multiple VLANs using a single physical interface.

The correct answer is:

d. To enable a router to route traffic between multiple VLANs using a single physical interface.

41. Which command seems most appropriate to be used to enter the interface configuration mode on a Cisco router?

a. ip address 192.168.1.1 255.255.255.0

b. interface fastethernet 0/0 c. interface gigabitether 0/0

d. interface

The correct answer is:

b. interface fastethernet 0/0

42. A client device can connect to the network but cannot access the internet,

What could be a possible cause of this issue related to DHCP?

a. The DHCP server is not providing the correct default gateway information.

b. The DHCP server is not providing the correct DNS server information.

c. The DHCP server is not providing the correct IP address.

d. Both A and B.

The correct answer is:

d. Both A and B.

43. What command will provide the IP Routing Table in does router?

a. show route

b. show run

c. show ip route

d. show routing lable

The correct command to view the IP Routing Table on a Cisco router is:

c. show ip route

44. By using which port, a cisco router cannot be configured remotely?

a. Telnet

b. HTTP

c. Console

d. SSH

The correct answer is:

c. Console

45. Consider a Cisco router configured with RIPv2. The router has the following interfaces and IP addresses:

Interface Fa0/0: 192.168.1.1/24

Interface Fa0/1: 10.0.0.1/24

Based on this configuration, what would be the RIPv2 network configuration on this Cisco router to advertise both networks?

a. router rip version 2

network 192.168.1.1

network 10.0.0.1

b. router rip version 2

network 192.168.1.0

network 10.0.0.0

c. router ripv2

   network 192.168.1.1

   network 10.0.0.1

d. router rip version 2

   network 192.168.1.0

   network 10.0.0.0

The correct answer is:

b. router rip version 2
network 192.168.1.0
network 10.0.0.0

46. A client device is unable to connect to the web server at all. What could be a possible cause of this issue?

a. The web server is down or unreachable.

b. The client device is not connected to the network.

c. The client device's firewall is blocking the connection to the web server.

d. All of the above.

The correct answer is:

d. All of the above.

47. Which device is used to create and manage VLANs in a network?

a. Switch

b. Router

c. Firewall

d. Modem

The correct answer is:

a. Switch

48. How do you assign an IP address to a router interface in Cisco IOS?

a. ip address 192.168.1.1 255.255.255.0

b. ip assign 192.168.1.1 255.255.255.0

c. ip set 192.168.1.1 255.255.255.0

d. ip config 192.168.1.1 255.255.255.0

The correct answer is:

a. ip address 192.168.1.1 255.255.255.0

49. Given a scenario where a PC connects to a switch, and the switch connects to a DHCP server, DNS server, and web server. When a user enters a URL of the web server from the PC, what is the sequence of actions happening?

a. The PC requests the DNS server for domain name resolution, then requests the web server for data

b. The PC requests the web server for data, then requests the DNS server for domain name resolution.

c. The PC requests the DHCP server for an IP address, then goes to the DNS server for domain name resolution and connects the web server.

d. The PC requests the DHCP server for an IP address, then requests the web server for data and finaly contacts the DNS server.

The correct answer is:

a. The PC requests the DNS server for domain name resolution, then requests the web server for data.

50. If two devices on the same network are assigned the same IP address, this can lead to an IP address conflict.

What is a common symptom of an IP address conflict?

a. Slow network speed

b. Inability to connect to the network

c. Frequent disconnections

d. All of the above

The correct answer is:

d. All of the above

51.