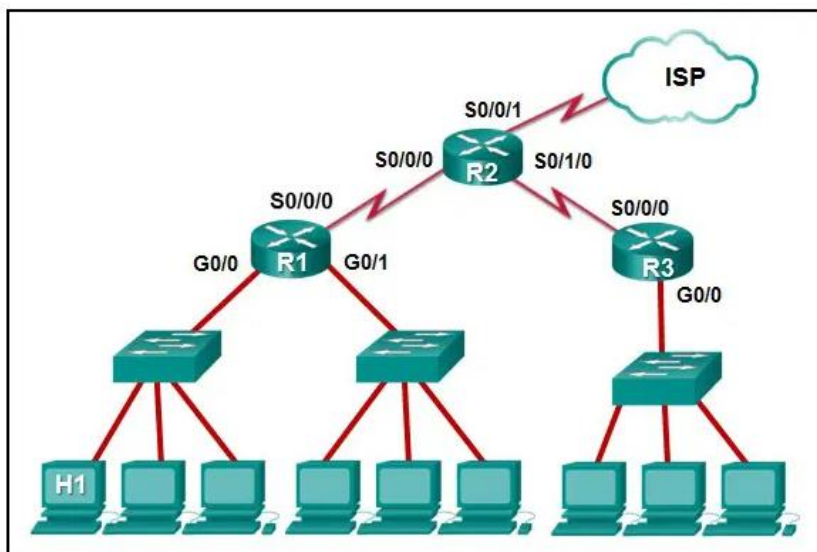


**Subject: NETWORKING FUNDAMENTALS / COMPUTER NETWORKS – COURSE WORK 1**

**Answer all questions. Calculators are not allowed.**

**Date: 14-02-2023****| Time: 09:00 – 10:00****Duration: 1 Hour**

1. The current IP configuration of a small company is done manually and is time-consuming. Because of increased network growth, a technician needs a simpler way for IP configuration of workstations. Which service would simplify the workstation IP configuration task?
  1. APIPA
  2. DHCP
  3. DIPS
  4. ICMP
2. Refer to the exhibit. The IP address of which device interface should be used as the default gateway setting of host H1?



1. R1: S0/0/0
  2. R2: S0/0/1
  3. R1: G0/0
  4. R2: S0/0/0
3. A teacher is having difficulties connecting his PC to the classroom network. He needs to verify that a default gateway is configured correctly. What is the best command to use to accomplish the task?
  1. ipconfig
  2. copy running-config startup-config
  3. show interfaces
  4. show ip nat translations

4. A client packet is received by a server. The packet has a destination port number of 53. What service is the client requesting?
  1. DNS
  2. NetBIOS (NetBT)
  3. POP3
  4. IMAP
5. What method can be used by two computers to ensure that packets are not dropped because too much data is being sent too quickly?
  1. encapsulation
  2. flow control
  3. access method
  4. response timeout
6. During a routine inspection, a technician discovered that software that was installed on a computer was secretly collecting data about websites that were visited by users of the computer. Which type of threat is affecting this computer?
  1. DoS attack
  2. identity theft
  3. spyware
  4. zero-day attack
7. Which three configuration components are required to allow a host to communicate with other hosts on remote networks? (Choose three.)
  1. IP address
  2. DNS server
  3. subnet mask
  4. domain name
  5. default gateway
  6. DHCP server address
8. What is a result when the DHCP servers are not operational in a network?
  1. Workstations are assigned with the IP address 127.0.0.1.
  2. Workstations are assigned with IP addresses in the 10.0.0.0/8 network.
  3. Workstations are assigned with IP addresses in the 169.254.0.0/16 network.
  4. Workstations are assigned with the IP address 0.0.0.0.
9. A network administrator is upgrading a small business network to give high priority to real-time applications traffic. What two types of network services is the network administrator trying to accommodate? (Choose two.)
  1. voice
  2. video
  3. instant messaging
  4. FTP
  5. SNMP

10. A user needs to connect to Cisco.com but does not know the IP address for this website. What type of server will translate the website name into an IP address?
1. DNS server
  2. web server
  3. proxy server
  4. FTP server
11. Which three devices are considered intermediate devices in a network? (Choose three.)
1. router
  2. server
  3. switch
  4. workstation
  5. network printer
  6. wireless access point
12. The network layer concerns with
1. bits
  2. frames
  3. packets
  4. none of the mentioned
13. At which OSI layer is a destination MAC address added to a PDU during the encapsulation process?
1. data link layer
  2. transport layer
  3. application layer
  4. network layer
14. A user is setting up a home wireless network. Which type of device must the user have in order to establish the wireless network and provide access to the internet for multiple home devices?
1. hub
  2. wireless router
  3. switch
  4. patch panel
15. Two students are working on a network design project. One student is doing the drawing, while the other student is writing the proposal. The drawing is finished and the student wants to share the folder that contains the drawing so that the other student can access the file and copy it to a USB drive. Which networking model is being used?
1. peer-to-peer
  2. client-based
  3. master-slave
  4. point-to-point
16. A computer has to send a packet to a destination host in the same LAN. How will the packet be sent?
1. The packet will be sent to the default gateway first, and then, depending on the response from the gateway, it may be sent to the destination host.
  2. The packet will be sent directly to the destination host.
  3. The packet will first be sent to the default gateway, and then from the default gateway it will be sent directly to the destination host.
  4. The packet will be sent only to the default gateway.

17. You have an interface on a router with the IP address of 192.168.192.10/29. Including the router interface, how many hosts can have IP addresses on the LAN attached to the router interface?
1. 6
  2. 8
  3. 30
  4. 32
18. When a router receives a packet, what information must be examined in order for the packet to be forwarded to a remote destination?
1. source IP address
  2. destination IP address
  3. destination MAC address
  4. source MAC address
19. Which type of server would support the SMTP, POP, and IMAP protocols?
1. DHCP
  2. email
  3. proxy
  4. syslog
20. What is the equivalent decimal value given a binary number of 11001010?
1. 196
  2. 202
  3. 212
  4. 240
21. Which layer in the TCP/IP model is used for formatting, compressing, and encrypting data?
1. Internetwork
  2. Session
  3. Presentation
  4. Application
  5. network access
22. What process is used to place one message inside another message for transfer from the source to the destination?
1. access control
  2. decoding
  3. encapsulation
  4. flow control
23. The technician is extending the network from the main office building over several hundred meters to a new security station. The security station needs a high-speed connection to support video surveillance of the main building. What type of cable is best suited to connect the security station to the rest of the main office network?
1. fiber optic
  2. unshielded twisted pair
  3. shielded twisted pair
  4. coax
24. Which two parts are components of an IPv4 address?
1. subnet portion
  2. network portion
  3. host portion
  4. broadcast portion

25. A PC is not able to connect to a wired network. Pinging the loopback address is successful, but the gateway cannot be reached. On the network switch all the interface lights are on, except for the interface connected to the PC. The LED on the network card is off. What is the most likely cause of this problem?
1. The gateway needs to be fixed.
  2. The network cable is faulty.
  3. The PC has an incorrect IP address for the DNS server.
  4. The network switch is faulty.
26. A technician can ping the IP address of the web server of a remote company but cannot successfully ping the URL address of the same web server. Which software utility can the technician use to diagnose the problem?
1. tracert
  2. ipconfig
  3. netstat
  4. nslookup
27. What characteristic describes antivirus software?
1. applications that protect end devices from becoming infected with malicious software
  2. a network device that filters access and traffic coming into a network
  3. a tunneling protocol that provides remote users with secure access into the network of an organization
  4. software on a router that filters traffic based on IP addresses or applications
28. Users report that the network access is slow. After questioning the employees, the network administrator learned that one employee downloaded a third-party scanning program for the printer. What type of malware might be introduced that causes slow performance of the network?
1. virus
  2. worm
  3. phishing
  4. spam
29. A site administrator has been told that a particular network at the site must accommodate 126 hosts. Which subnet mask would be used that contains the required number of host bits?
1. 255.255.255.0
  2. 255.255.255.128
  3. 255.255.255.224
  4. 255.255.255.240
30. Which address prefix range is reserved for IPv4 multicast?
1. 240.0.0.0 – 254.255.255.255
  2. 224.0.0.0 – 239.255.255.255
  3. 169.254.0.0 – 169.254.255.255
  4. 127.0.0.0 – 127.255.255.255