1. DNS resolver forward the request to\_\_**B**

Choose one

1. ccTLD
2. DNS root name server
3. gTLD
4. None of the above/ below
5. Reverse-lookup pointer (PTR)records which map an\_\_\_**B**\_\_\_

Choose one

A.IP Address to MX records

B.IP address to a domain name

C.zone to IP address

D.domain name to IP address

1. An attack where the attacker configures a replicated DHCP server on his device and connects that device to the local network is known as \_\_\_Man-in-middle attack\_\_\_\_\_\_. Answer format: Cyber attack
2. Which statements are true for nslookup as a querying tool? **C**

Choose one

1. Updating MAC addresses
2. Finding the MAC address of a host
3. Finding the IP address of a host
4. Finding path of file transfer
5. What are the four steps in DHCP IP configuration between the DHCP client and the DHCP server? **B**

Choose one

1. DHCPDUDP, DHCPOffer, DHCPReceived, and DHCPAck
2. DHCPDiscover, DHCPOffer, DHCPRequest, and DHCPAck
3. DHCPUDP, DHCPOffer, DHCPRequest, and DHCPAck
4. DHCPDMAC, DHCPOffer, DHCPSend, and DHCPAck
5. What are the methods of DHCP IP configuration?

Choose one **C**

1. dynamic allocation, automatic allocation, and random allocation
2. static allocation, dynamic allocation, and systematic allocation
3. static allocation, dynamic allocation, and automatic allocation
4. static allocation, random allocation, and automatic allocation
5. When the DHCP server receives a DHCP request in the UNICAST message, it knows that it is either forwarded by the switch/router or it is a direct message from **client**.
6. \_**Domain Name System**\_\_\_ is a naming database in which internet domain names are located and translated into Internet Protocol (IP) addresses. Answer format: MAC address database You have to write the full name if you write the short form, your answer will be considered as incorrect.
7. \_\_**ccTLD**\_\_\_\_\_ are delegated to individual county governments for administration purposes. Answer format : ddTBL
8. By default, when a DHCP broadcasts a message, depending on how it is configured, it can forward the message or \_**Discard**\_\_ it immediately. Answer Format: Route
9. Choose from the options A-D the correct answer that describes a method of mapping an IP address space into another by modifying network address information in the IP header of packets while they are in transit across a traffic routing device. **D**

Choose one

1. TLD
2. DNS
3. PTR
4. NAT
5. www.cdut.edu.cn is an example of\_\_\_ **A**

Choose one

1. ccTLD
2. gTLD
3. DNS root name server
4. Both B and C
5. Choose from the options A-D which type of DNS query provides an IP address and request a hostname? **C**

Choose one

1. Iterative query
2. Recursive query
3. Inverse query
4. DNS Server query
5. Since the DHCP server uses the source address of the incoming unicast message to determine the subnet of the client, if the source IP address of an incoming message is 10.0.0.1/8, what will be the default gateway IP\_\_**10.0.0.1/8**\_\_\_\_\_? Answer format: 10.0.0.20/12?
6. The man-in-the-middle attack threat can be mitigated by the configuration of

**DHCP snooping**. Answer format: IP attacking

1. DHCP \_**Snooping**\_ allows the switch to filter and block certain types of DHCP traffic and works on a per-VLAN basis. Answer format: Server If your spelling is not correct, your answer will be considered wrong
2. DHCP reserved IP addresses are addresses assigned to critical devices such as routers, servers, and \_\_\_\_\_\_. **C**

Choose one

1. Laptop
2. Speaker
3. Printers
4. Mobile
5. Which technology supports the stateless assignment of IPv6 addresses? Answer format: "Big-structure". Don't write the quotation marks and full stop; if you do so, your answer will be considered wrong.

**Auto-configuration**

1. What is the meaning of the notation: :/128 used by IPv6?

Choose one **D**

1. Loopback address **::1/128**
2. Default Route **::/0**
3. EIGRP **FF02::/A**
4. Unspecified Address
5. Which statement about IPv6 is false?

Choose one **D**

1. Supports Mobility **支持漫游，因为ipv6全球唯一**
2. Anycast addresses are used
3. Provides a larger address space **128位**
4. Broadcast addresses are used **没有**
5. IPv6 introduced a new type of addressing, which is called\_\_\_**Anycast**\_\_\_\_ Answer format: "Univast". Don't write the quotation marks and full stop; if you do so, your answer will be considered wrong.
6. DHCP \_**Snooping**\_ allows the switch to filter and block certain types of DHCP traffic and works on a per-VLAN basis.

Answer format: "Server". Don't write the quotation marks and full stop; if you do so, your answer will be considered wrong.

1. Which feature can dynamically assign IPv6 addresses?

Choose one **A**

1. IPv6 stateless auto-configuration **NDP**
2. DHCP **stateful**
3. NHRP
4. ISATAP tunneling
5. Which Statement is True for IPv6? **A**

Choose one

1. All answers are correct
2. IPv6 efficiently processes the packet **简化了报头**
3. IPv6 header is extensible to add more information in the option part

D. IPv6 was designed keeping mobility in mind.

1. If IPv4 hosts send information to the IPv6 internet (which doesn’t understand IPv4). To solve this issue, we can use \_\_\_\_\_\_\_\_\_

Choose one **A**

1. Network Address Translator **NAT-PT**
2. Exterior Routing Protocol
3. Link-State Routing Translator
4. Interior Routing Translator
5. A DHCP pool is a collection of IP configurations assigned to \_**DHCP**\_ clients Answer format: "IBP". Don't write the quotation marks and full stop; if you do so, your answer will be considered wrong. Write the short form only.
6. PDU in transport layer is called \_**Segment**\_ Answer format: "Packet". Don't write the quotation marks and full stop; if you do so, your answer will be considered wrong.
7. IPV6 works on which layer? **Network Layer**

Answer format: "Architecture Layer". Don't write the quotation marks and full stop; if you do so, your answer will be considered wrong.

1. If there is no option field, the IPv6 header is **40 bytes** long

Answer format: "100 bytes". Don't write the quotation marks and full stop; if you do so, your answer will be considered wrong.

1. Which one is used to stop packets from looping in the network infinitely? **B**

Choose one

1. Source Address
2. Hop Limit
3. Traffic Class
4. Next Header
5. Which is not a routing protocol in IPv6?

Choose one **A**

1. Network
2. OSPF
3. EIGRP
4. RIPng
5. What service router should be provided to the receiving packet is decided based on \_**Routing Header**\_ Answer format: "Next Header". Don't write the quotation marks and full stop; if you do so, your answer will be considered wrong.
6. ICMP used in which layer? Answer format: "Presentation Layer"

**Network Layer**

1. Network Interface Card used in which layer?

**Data Link Layer**

1. MAC address used in which layer?

Answer Format: Presentation Layer

**Data Link Layer**

1. If one host in the network, whose IP is 11.0.0.0, wants to send a message to all the other hosts in the same network, then what will be the directed broadcast address? Your answer format should be : "11.0.0.0", Don't put any extra space, if do so, your answer will be wrong.

**11.255.255.255**

1. Which device is used in the Application Layer of the OSI Model?

Choose one  **C**

1. Router **3**

B. Firewall **3 4 7**

C. Gateway **7**

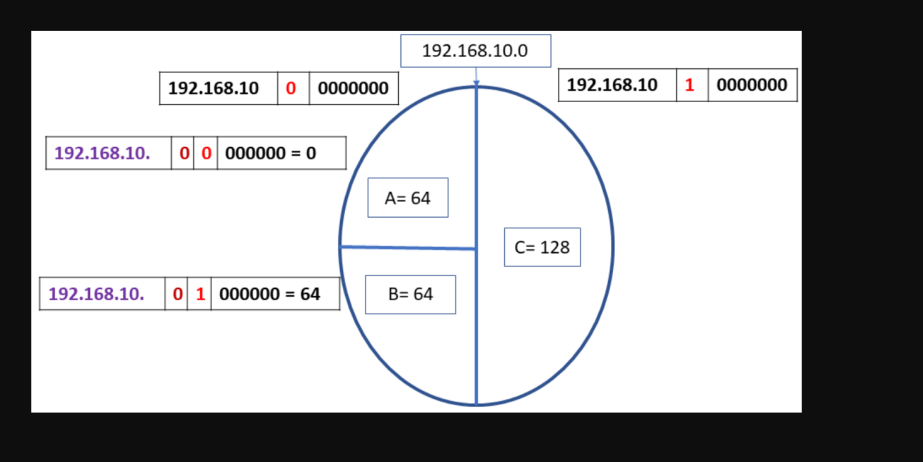
D. None of the above

1. A host from network A wants to send a packet to a host of network B whose IP address is 192.168.10.198 and the subnet mask of that network is 255.255.255.192. Now find the network IP of the destination address, **192.168.10.192**

**11111111.11111111.11111111.11000000**

**11000000.10101000.00001010.11000110**

**AND之后得到：192.168.10.192**



1. The basic elements of layered architecture are services, protocols and \_**interfaces**\_
2. SMTP protocol used in which layer? Answer Format: "Data Link Layer." If you don't follow the exact format, your answer will be considered wrong.

**Application Layer**

1. User Datagram Protocol used in which layer?

Answer Format: "Presentation Layer"

**"Transport Layer"**

1. Consider, the network ID of the source network is 11.0.0.0 and the destination network ID is 20.0.0.0. What will be the directed broadcast IP? **20.255.255.255**
2. What is the full meaning of OSI?

Choose one **C**

1. Organization System Interface
2. Open Sense Interswitch
3. Open Systems Interconnection
4. Over Sensor Interaction
5. If you want to divide the network into two subnets, whose IP address is 192.168.10.0,

what will be the range of the first subnet and the second subnet? **192.168.10.0 - 192.168.10.127 and 192.168.10.128 - 192.168.10.255**

Answer Format: 168.20.30.1 - 168.20.30.128 and 168.20.30.129 - 168.20.30.256 You have to follow the specific format with propoer spacing, otherwise your answer will be consiered as wrong.

1. If your organization has three departments named A, B, and C, and the department A has almost 100 workers and the other two have 58 and 50 workers, respectively, if the IP address of that organization is 205.222.55.0 and the first part represents department A, then what will be the subnet mask for Department B.

**255.255.255.192**

1. Find out how many subnetworks we have if the subnet mask is 255.255.255.192 and it is class C IP address. Just write the number. **4**
2. Find how many bits are network bits: 191.168.20.32? Just write the number. **16**
3. Compute the 2’s complement of the number -63 (8 bit representation)

**11000001**

1. Compute the 2’s complement of the number -89 (8 bit representation)

**10100111**

1. How many numbers of bit does IP address has \_\_**32**\_\_? Just write the number; don't write bits after number
2. Convert the number BA3C\_16 =?\_2 using 8421 method

**1011101000111100**

1. The first four bits of the IP address are 1111; which class of IP is this? Answer Format: Class A Class B .........**Class A**
2. What is the address class of 191.168.20.55? Answer Format: Class B Class C .........

**Class B**

1. Find the subnet mask of the following IP address :

200.168.20.35

**255.255.255.0**

1. Convert the number 272\_10 =?\_2

Choose one **A**

1. 100010000\_2
2. 100110011\_2
3. 100010001\_2
4. 11001000\_2
5. What is the address class of 14.82.19.55? \_\_\_\_**Class A**\_\_\_\_ Answer Format : Class B Class C .........
6. What is the responsibility of DNS server?

Choose one **A**

1. Convert name to ip address
2. Convert the server name to Website name
3. Convert the ip address to name
4. Convert the website name to server name
5. Convert the number 101101111\_2= ? **367\_10.**

To write base, you have to use the "\_" sign. For example, if your answer is 101, then write 101\_10

1. Convert the number 750\_10 =? **2EE\_16**. To write base, you have to use the "\_" sign. For example, if your answer is 101, then write 101\_10
2. Convert the number 326\_10 =? **506\_8** A.5088 To write base, you have to use the "\_" sign. For example, if your answer is 101, then write 101\_10
3. Convert the number 5EAF. A\_16 = **24239.625\_10**

To write base, you have to use the "\_" sign. For example, if your answer is 101, then write 101\_10

1. To reach the process of HTTP, which port number is used? Just write the port number.

**80**

1. Convert the number 101111.1011\_2 = **47.6875\_10**. To write base, you have to use the "\_" sign. For example, if your answer is 101, then write 101\_10
2. Convert the number 476\_8 =? **13E\_16**
3. To configure a switch from your laptop, which cable should you use and which port do you have to connect on the laptop side? Answer format: ..**Console**... cable and ..**RS232**.. port. Only first letter will be capitalized, and port number should have specific format.
4. What is the CIDR number for 255.255.248.0/ **21**
5. What is the broadcast address for the network 10.136.80.64/27?

11111111.11111111.11111111.11100000

10.136.80.01000000

10.136.80.01000000

10.136.80.64/27

2^5 = 32

**10.136.80.95/27**

1. Which type of addressing for communication does IPv6 not utilize? **B**
2. Global unicast
3. Port
4. Link local
5. Unique local
6. Which technology supports the stateless assignment of IPv6 addresses? **D**
7. DNS
8. DHCPv6
9. DHCP
10. Auto-configuration
11. What is the meaning of RA in IPv6? **C**
12. Reach Advance
13. RIP advertisement
14. Router advertisement
15. None of these
16. In which way is an IPv6 header simpler than an IPv4 header?
17. Unlike IPv4 headers, IPv6 headers have fixed length **40 bytes**
18. IPv6 headers use the Fragment Offset field in place of the IPv4 Fragmentation field **没有**
19. IPv6 headers use a smaller Option field size than IPv4 headers **没有**
20. IPv4 headers use a 4-bit TTL field, and IPv4 headers use an 8-bit TTL field **IPv4 的TTL是8bit， ipv6没有TTL**
21. **Static NAT** only works if there are few clients or several public IP addresses to use.
22. Which statements are true for describing how inside local IP address are mapped with an inside global IP address **C**
23. Station NAT
24. Dynamic NAT
25. Static NAT
26. PAT
27. Choose from A-D the correct answer that describes a method of mapping an IP address space into another by modifying network address information in the IP header of packets while they are in transit across a traffic routing device **C**
28. DNS
29. PTR
30. NAT  
    D. TLD
31. What is the full meaning of UDP **D**
32. Usable Data Point
33. Unity Denial Port
34. Universal Data Pool
35. Unity Dashboard Pole
36. User Datagram Protocol
37. UDP is an **unreliable** protocol as it discovers the errors but not specify the error
38. A point-to-point connection provides a **dedicated** connection between devices
39. In IPv6, the ARP has been replaced by **ICMPv6**