

**21. If IP=204.15.16.139 and subnet mask=255.255.255.240 is given, find out : Subnet address (SID) and Direct broadcast address (DBA ) of that subnet**

- (A) SID : 204.15.16.192, DBA 204.15.16.255
- (B) SID : 204.15.16.128, DBA : 204.15.16.254
- (C) SID : 204.15.16.128, DBA : 204.15.16.143
- (D) SID : 204.15.16.192, DBA : 204.15.16.254

**22. If a class B network is divided into subnets, and the subnet mask is 255.255.192.0, then how many subnets and hosts per subnet are possible?**

- (A) 4,  $2^{14} - 2$
- (B) 4, 16
- (C) 16, 16
- (D) 4,  $2^{14}$

**23. 255.255.63.0 is the subnet mask for the network. Which of the following pairs of IP addresses could belong to same network ?**

- (A) 176.64.88.62 and 176.64.87.23.42
- (B) 11.45.28.12 and 11.45.99.24
- (C) 125.18.130.25 and 125.18.194.46
- (D) 193.213.31.67 and 193.213.96.89

**Common Data Questions: 24 and 25**

**An ISP has a block with block ID as shown: 193.1.0/24**

**24. The number of bits reserved for Host ID and the number of hosts possible is?**

- (A)  $2^4$ ,  $2^{24} - 2$
- (B) 8,  $2^8 - 2$
- (C)  $3^2$ ,  $2^{32} - 2$
- (D) 16,  $2^{16} - 2$

**25. Match A with B**

**List A**

Source IP      Destination IP

- a. Data | 240.255.255.255 | 40.40.40.40
- b. Data | 22.21.23.34 | 255.255.255.255
- c. Data | 24.23.22.21 | 24.22.23.24

**List B**

- 1. Unicast packet with in network.
- 2. This packet will never exist
- 3. Limited broadcast address.

- |     |   |   |   |
|-----|---|---|---|
|     | a | b | c |
| (A) | 1 | 2 | 3 |
| (B) | 2 | 3 | 1 |

- (C) 1 3 2  
(D) 2 1 3

**26. Given the following IP address and network mask, find the corresponding broadcast address?**

**IP: 160.168.30.100                      Net Mask: 255.255.240.0**

- A. 160.168.240.255                      B. 160.168.30.255  
C. 160.168.31.255                      D. 160.168.255.255

**27. Consider a router connecting a college's network to the Internet applies the subnet mask 255.255.252.0 to the destination address of incoming IP packets. Find the corresponding subnet for the destination IP address of packet 159.133.7.220.**

- A. 159.133.0.0 B. 159.133.4.0 C. 159.133.6.0 D. 159.133.7.0

**28. What could be the network mask if the direct broadcast address of a network is 186.19.07.255?**

- A. 255.255.248.0                      B. 255.255.252.0  
C. 255.255.254.0                      D. All the above

**29. Given the IP-address 0xBF2F1582, 5 bits are borrowed from Host ID to do subnetting. How many valid host IPs are possible for each subnet?**

- A. 2046                      B. 2048                      C. 1024                      D. 022

**30. A large number of the consecutive IP address are available starting at 192.168.0.0. Suppose that five universities, HU, BU, CU, DU and PU have requirement of 4000, 2000, 500, 1000 and 7000 IP address blocks respectively. There is a large number of consecutive IP address available with starting of 192.168.0.0. What will be the valid first and last IP address assigned for BU?**

- A. 192.168.12.0/21 → 192.168.61.255/21  
B. 192.168.48.0/21 → 192.168.55.255/21  
C. Either (A) or (B)  
D. Neither (A) nor (B)

**31. An organization is granted the block 151.36.0.0/16. The administrator wants to create 512 subnets. Find the number of hosts in each subnet.**

- A. 128      B. 127      C. 126      D. 125

**33. Consider the population of various continents as follows:**

**Africa - 900 Million; Asia - 3700 Million; North America - 400 Million;**

**South America - 500 Million; Europe - 700 Million**

**Suppose each person in each continent requires one IP address.**

**Then which of the following statements is true?**

- A. The above requirement can be fulfilled by IPV4 addressing.  
B. The above requirement can be fulfilled by IPV6 addressing.  
C. The above requirement can be fulfilled by both IPV4 and IPV6 addressing.  
D. None

**33. Match the following List – I with List – II.**

**List-I**

- A. Unicast address  
B. Limited broadcast  
C. Directed broadcast  
D. Network address

**List-II**

- (i) 20.0.0.0  
(ii) 20.1.2.3  
(iii) 11.255.255.255  
(iv) 127.0.0.1  
(v) 255.255.255.255  
(vi) 0.0.0.0

Codes:

- |    | <b>A</b> | <b>B</b> | <b>C</b> | <b>D</b> |
|----|----------|----------|----------|----------|
| a. | i        | iii      | v        | vi       |
| b. | ii       | iii      | v        | i        |
| c. | ii       | v        | iii      | i        |
| d. | i        | v        | iii      | iv       |

Answer: Option C

**34. Consider the address 141.14.196.46 and subnet mask 255.255.192.0. Find the subnet id?**

- (A) 141.14.1.46      (B) 141.14.192.0  
(C) 255.255.192.0      (D) None of these

**35. In the IPv4 addressing format, the number of networks allowed under Class C addresses is**

- (A)  $2^{14}$  (B)  $2^7$  (C)  $2^{21}$  (D)  $2^{24}$

**36. The number of networks allowed under class A address in IPv4 addressing format is \_\_\_\_\_.**

- A. 127 B. 128 C. 126 D. 125

**38. Match the following groups**

**Group-1 (Address Range)**

- A. 0.0.0.0  
B. 10.0.0.0 - 10.255.255.255  
C. 127.0.0.0 - 127.255.255.255  
D. 255.255.255.255

**Group-2 (Purpose)**

1. Unknown network/default  
2. Limited broadcast  
3. Reserved for Loopback/local address  
4. Reserved for private use

**Codes:**

- |     | A | B | C | D |
|-----|---|---|---|---|
| (a) | 1 | 2 | 3 | 4 |
| (b) | 4 | 2 | 3 | 1 |
| (c) | 1 | 4 | 3 | 2 |
| (d) | 4 | 1 | 3 | 2 |

**39. For a class C network if IP address of a computer is 200.99.39.112 and subnet mask is 255.255.255.224 the first host of first subnet (represent last octet) is \_\_\_\_\_.**

- A. 200.99.39.33 B. 200.99.39.112  
C. 200.99.39.96 D. 200.99.39.224

**40. For a class C network if subnet mask is 255.255.255.224. What is the maximum number of hosts including all subnets?**

- A. 180 B. 170 C. 175 D. 185