

Computer Network

IPv4 Addressing

DPP 02

[MSQ]

1. Which of the following is/are correct?

- (a) In unicast communication transmitting a packet from one computer to another computer in different class is possible.
- (b) In unicast communication transmitting a packet from one computer to another computer in same class is possible.
- (c) Transmitting a packet from one computer to all computer is called multicast communication.
- (d) Transmitting a packet from one computer to many computer is called broadcast communication.

[MCQ]

2. Which of the following is true?

- (a) Network ID is same for each class in IP address.
- (b) Direct broadcast address (DBA) is same for each class.
- (c) Limited broadcast address (LBA) is same for class A, B and C.
- (d) Limited broadcast address (LBA) for class D is 255.255.255.255.

[NAT]

3. Consider a host with IP address 192.11.0.248, how many network ID bits are allocated for given IP? ____.

[NAT]

4. Consider the following statements:

S₁: ARP request is always broadcast with in the network.

S₂: ARP reply is unicasting.

S₃: MAC address is of 6 bytes.

S₄: With the help of port number process can be found within the host.

Total number of INCORRECT statements is/are ____.

[MCQ]

5. Consider a host with IP address 190.11.25.0 which of the following will be a valid network ID?

- (a) 190.11.255.255
- (b) 190.0.0.0
- (c) 190.11.0.0
- (d) None of these

[MCQ]

6. Consider the IP address 224.224.92.69 which of following will be direct broadcast address for the given host IP?

- (a) 224.224.92.255
- (b) 224.244.255.225
- (c) 255.255.255.255
- (d) None of these

[MSQ]

7. Consider an IP address 167.0.64.68. Which of the following option is/are correct for given IP address?

- (a) Limited broadcast address for the given IP address is 255.255.255.255.
- (b) Direct broadcast address for given IP address is 167.255.255.255.
- (c) Network ID for given IP address is 167.0.0.0.
- (d) Limited broadcast address for given IP is same as direct broadcast address.

[MCQ]

8. The correct dotted decimal notation format for given hexadecimal notation (HDN) 162184AF is

- (a) 175.132.33.22
- (b) 22.33.132.174
- (c) 22.33.132.175
- (d) None of these

Answer Key

- | | |
|-----------|-----------|
| 1. (a, b) | 5. (c) |
| 2. (c) | 6. (d) |
| 3. (24) | 7. (a, c) |
| 4. (0) | 8. (c) |



Hints & Solutions

1. (a, b)

- Transmitting a packet from one computer to another computer with in the same class or in the different class is known as unicast communication.
- Transmitting a packet from one to many (0 or more) is known as multicast communication.
- Transmitting a packet from one to all computer is known as broadcast communication.

2. (c)

- Limited broadcast address (LBA) is same for class A, B and C i.e 255.255.255.255.
- There is no LBA and DBA in class D and E.

3. (24)

IP = 192.11.0.248

= 110000000.00001011.00000000.11111000

↓

First three bits are 110. It's class C IP address

Class C IP range = 192 – 223

Class C

← 32 bits →

NID	HID
-----	-----

24 bits 8 bits

Total NID bits = 24

Hence, (24) is correct.

4. (0)

- ARP request is broadcasting.
- ARP reply is unicasting.
- Size of MAC address is 48 bits or 6 bytes.
- Identification of process with in the host is port number.

5. (c)

IP address: 190.11.25.0 (Class B)

Network mask: 255.255.0.0

- IP address
AND
Network mask

Network ID

- 190.11.25.0

AND

255.255.0.0

= 10111110.00001011.00011001.00000000

11111111.11111111.00000000.00000000

10111110.00001011.00000000.00000000

NID = 190.11.0.0

Hence, option (c) is correct.

6. (d)

IP = 224.224.92.69

- Class D range 224 to 240. So, it belongs to class D IP address.
- For class D there is no NID, HID, DBA and LBA because class D IP address is used for multicasting.

7. (a, c)

IP address = 167.0.64.68

167.0.64.68

Network ID = AND

255.255.0.0

167.0.0.0

DBA = 167.0.255.255

LBA = 255.255.255.255

Hence, option (a, c) are correct.

8. (c)

HDN = 162184AF

=

1	6	2	1	8	4	A	F
0001	0110	0010	0001	1000	0100	1010	1111

= 00010110.00100001.10000100.10101111

= 22.33.132.175

Hence, option (c) is correct.



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