1. (Single) Which of the following statements about a Layer 3 switch is false?（ A ）
2. Layer 3 switches can only forward packets at Layer 3 but cannot forward packets at Layer 2.
3. Layer 3 switches support routing and forwarding through VLANIF interfaces.
4. A Layer 3 switch can forward both Layer 2 and Layer 3 packets.
5. A Layer 3 switch can implement route forwarding through a Layer 3 physical interface.
6. (Multiple) PC1 belongs to VLAN 10 and its IP address is 192.168.1.1/24. PC2 belongs to VLAN 20 and its IP address is 192.168.1.2/24. Which of the following statements are true?（ BC ）
7. The two PCs can directly access each other.
8. The two PCs cannot directly communicate with each other.
9. After PC1 is changed to VLAN 20, the two PCs can directly communicate with each other.
10. After the IP address of PC2 is changed to 192.168.2.1/24, the two PCs can directly communicate with each other.
11. (True or False) When sub-interfaces are used to implement inter-VLAN communication, the interface connecting the switch to the router must be configured as a trunk interface.（ A ）
12. True
13. False
14. (True or False) When a Layer 3 switch is used to implement inter-VLAN communication, the VLANIF interface number must be the same as the corresponding VLAN ID.（ A ）
15. True
16. False
17. (True or False) When implementing inter-VLAN communication, the sub-interfaces of routers and VLANIF interfaces of Layer 3 switches do not process the corresponding tags.（ B ）
18. True
19. False
20. Q: When a sub-interface is used to implement inter-VLAN communication, how does the switch interface connected to the router need to be configured?  
    A: Configure the interface as a trunk or hybrid interface to permit packets carrying VLAN tags corresponding to terminals.
21. Q: Configure the interface as a trunk or hybrid interface to permit packets carrying VLAN tags corresponding to terminals.

A: The source and destination IP addresses remain unchanged during packet forwarding (without NAT), but the source and destination MAC addresses change. Each time a packet passes through a Layer 3 device, its source and destination MAC addresses change.