**DV300\_11\_SAS on video related to IP ADRESSES**

**Self-Assessment Sheet**

Q1. An IP address is a numeric address. It's an\_\_\_\_\_\_\_\_\_\_\_ for a computer or device on a network.

A1. Identifier

Q2. The first part is the \_\_\_\_\_\_\_\_\_\_\_ address and the second part is the\_\_\_\_\_\_\_\_\_\_\_ address.

A2. Network Address & Host Address

Q3. The two version of IP address are \_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_.

A3. IPv4 & IPv6

Q4. IP version 4 is a 32-bit numeric address written as four numbers separated by\_\_\_\_\_\_\_\_\_\_\_. Each group of numbers that are separated by periods is called an\_\_\_\_\_\_\_\_\_\_.

A4. Period & Octet

Q5. IP address 4 is made up of \_\_\_\_\_\_\_\_\_\_\_\_\_\_sets of eight binary bits

A5. 4

Q6. In IPv4 starting from the left, the first bit has a value of 128 then 64 then 32 and so on to 1. Each bit on the octet can be either a 1 or a 0. If the number is a 1 then the number that it represents\_\_\_\_\_\_\_\_\_\_. If the number is a\_\_\_\_\_\_\_ then the number that it represents does not count.

A6. Counts & Zero

Q7. By manipulating the 1s and the 0s in the octet, you can come up with a range from 0 to 255. (True/False)

A7. True

Q8. \_\_\_\_\_\_\_\_\_\_\_\_\_\_, produced over 4 billion addresses. Engineers thought it would be enough but it wasn’t.

A8. IPv4

Q9. The IP version 4 address is a \_\_\_\_\_\_\_\_\_ numeric address. Whereas IP version 6 is a \_\_\_\_\_\_\_\_\_\_\_\_ hexadecimal address. Hexadecimal uses both numbers and alphabets in the address

A9. 32-bit & 128-bit

Q10. IP version 6 can produce an unbelievable \_\_\_\_\_\_\_\_\_\_\_\_ IP addresses. That's the number 340 with 36 digits after it.

A10. 340 undecellion

Q11. IP version 6 is a 128 bit hexadecimal address. It's made up of \_\_\_\_\_\_\_\_\_\_ with the 8 sets separated by \_\_\_\_\_\_\_as you can see here.

A11.8 sets of 16 bits & colon

Q12. In an IP version 6 IP address each hexadecimal character represents 4 bits. So, we have to convert 4 bits at a time to get one\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

A12. Hexadecimal character

Q13. In hexadecimal, we convert the first 4 bits and put those bits up there against our 4-bit chart which includes an \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

A13. 8,4,2 & 1

Q14. In a hexadecimal format, \_\_\_\_\_\_\_\_\_\_\_numbers have to be represented with a single alphabet which is 'A' through 'F'.

A14. Double digit

Q15. A stand for \_\_\_\_\_\_\_\_\_\_ and F stand for \_\_\_\_\_\_\_\_.

A15. 10 & 15

Q16. The way to tell which section belong either to the network or the host is the way \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ comes in.

A16. Subnet Mask

Q17. Subnet mask is a number that resembles an IP address it reveals how many bits in the IP address are used for the network by mask in the \_\_\_\_\_\_\_\_\_\_\_\_\_\_ portion of the IP address.

A17. Network

Q18. \_\_\_\_\_\_\_\_\_it will indicate the position of the IP address that defines the network.

A18. 1

Q19. We cross up all the digit in the IP address that line up with the 1 in the subnet mask and when you this it will reveal that the first two octets are the network portion and the remaining is the host portion. (True/False)

A19. True

Q20. A class A IP address range is\_\_\_\_\_\_\_\_\_\_\_\_\_ to \_\_\_\_\_\_\_\_\_\_\_. This class supports \_\_\_\_\_\_\_\_\_\_\_host on 126 networks. This class is mainly given to large organizations because of the tremendous amount of the IP addresses is given out.

A20. 1-126 & 60 Million

Q21. Class B IP addresses ranges from\_\_\_\_\_\_\_\_\_ to \_\_\_\_\_\_\_\_. And this class support 65 thousand host on \_\_\_\_\_\_\_\_\_\_ networks. This class is given to medium size organizations.

A21. 128-191 & 16000

Q22. Class C IP address range is from\_\_\_\_\_\_\_\_\_ to \_\_\_\_\_\_\_\_. This class supports \_\_\_\_\_\_\_ hosts on 2 million networks. And this class is given to small organizations.

A22. 192-223 & 254

Q23. Number 127 is reserved for the \_\_\_\_\_\_\_\_\_\_\_\_\_\_.

A23. Internal loopback functions

Q24. Public IP addresses are publicly registered on the internet. Which basically means that if you have a public IP address you have access to the internet. But private IP address are different. (True/False)

A24. True

Q25. Why you cannot directly access the internet with a private IP?

A25. A private IP is not publicly registered. So you cannot directly access the internet with a

private IP.

Q26. The \_\_\_\_\_\_\_\_\_\_\_\_\_ standard created private IP addressing to prevent a shortage of public IP address available to ISP and subscribers.

A26. RFC-1918 standard

Q27. Private IP ranges have 3 classes- Class A starts with a number\_\_\_\_\_\_\_\_. Class B start with a number \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. And class C start with number \_\_\_\_\_\_\_\_\_\_\_\_\_.

A27. 10 & 172 & 192