**DV162\_11\_PAS on video related to IP ADDRESSES**

**Possible Answers 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, Host.

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. Periods, Octet.

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

A5. 4 (Four).

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. Count, 0.

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 undecillion.

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, colons.

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. Wherever.

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, 16 millions.

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, 192, 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. We cannot directly access the internet with a private IP because private IP addresses are not publicly registered, so they cannot be used to access the internet directly.

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

A26. RFC-1918.

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.