WRITTEN TEST

Candidate for ICT Associate GL6, Goma, DRC

February 07, 2019

Candidate Name & Surname: _____

Duration: 2H

Section 1   Question 1 to 25: Multiple choices (2 points/Question)
Instruction: Please circle the answer or answers best match to the question. Choose all that apply.

    I.   On several occasions your wireless router has been compromised, and intruders are logging onto it. Which of the following strategies could you use to increase the security of the wireless router? (Choose the two best answers.) *(2points)*

        A. Use SSL
        B. Disable SSID broadcast
        C. Use MAC filtering
        D. Use wireless filtering

    II.   Your manager asks you to recommend a secure way to copy files between a server on your network and a remote server in another location. Which of the following solutions are you most likely to recommend? *(2points)*

        A. TFTP
        B. FTP
        C. SFTP
        D. IGMP

    III.   You are experiencing problems with the network connectivity of a Windows system. You suspect that there might be a problem with an incorrect route in the routing table. Which of the following TCP/IP utilities can you use to view the routing table? (Choose two.) *(2points)*

        A. tracert
        B. nbstat
        C. route
        D. netstat
        E. ping

    IV.   As part of a network upgrade, you have installed a router on your network, creating two networks. Now, workstations on one side of the router cannot access workstations on the

other side. Which of the following configuration changes would you need to make to the workstations to enable them to see devices on the other network? (Choose two.) *(2points)*

    A. Change the IP address assignments on one side of the router so that the router is on a different IP network from the other one.
    B. Update the default gateway information on all systems so that they use the newly installed router as the gateway.
    C. Update the default gateway information on all systems so that they use a workstation on the other network as the default gateway.
    D. Make sure that the IP address assignments on all network workstations are the same.

V.   Your colleague decides to close all unused ports on the corporate firewall to further secure the network from intruders. The open ports are 25, 80, 110, and 53. Your colleague knows that ports 25 and 110 are required for email and that port 80 is used for nonsecure web browsing, so he decides to close port 53 because he doesn't think it is necessary. Which service will be affected? *(2points)*

    A. HTTPS.
    B. FTP
    C. telnet
    D. DNS

VI.   A user informs you that she can't access the Internet from her system. When you visit her, you run the ipconfig /all utility and see the following information. What is the most likely reason the user is having problems accessing the Internet? *(2points)*

```
C:\>ipconfig /all

Windows IP Configuration
        Host Name . . . . . . . . . . . : LAPTOP
        Primary DNS Suffix  . . . . . . . :
        Node Type . . . . . . . . . . . : Broadcast
        IP Routing Enabled. . . . . . . . : No
        WINS Proxy Enabled. . . . . . . . : No

Ethernet adapter Local Area Connection:
        Connection-specific DNS Suffix  . :
        Description . . . . . . . . . . . : Intel 8255x-based PCI
                                            Ethernet
        Physical Address. . . . . . . . . : 00-D0-59-09-07-51
        DHCP Enabled. . . . . . . . . . . : No
        IP Address. . . . . . . . . . . . : 192.168.2.1
        Subnet Mask . . . . . . . . . . . : 255.255.255.0
        Default Gateway . . . . . . . . . :
        DNS Servers . . . . . . . . . . . : 192.168.2.10
                                            192.168.2.20
```

    A. The system is on a different subnet than the DNS servers.
    B. DHCP is not enable
    C. The subnet mask is incorrect
    D. The default gateway is not configured

VII.   A user complains that access to a web page is slow. What utility can you use to find the bottleneck? *(2points)*

        A. ping
        B. telnet
        C. tracert
        D. nbstat

VIII.   During the night, one of your servers powers down. Upon reboot, print services do not load. Which of the following would be the first step in the troubleshooting process? *(2points)*

        A. Examine the server log files.
        B. Reboot the server
        C. Reinstall the printer
        D. Reinstall the printer software

IX.   You are upgrading the antenna on your wireless network. You need to purchase an antenna that provides a 360-degree dispersed wave pattern. Which of the following antenna types would you select? *(2points)*

        A. Omni-dispersed antenna
        B. Directional-dispersed antenna
        C. Directional antenna
        D. Omnidirectional antenna

X.   You have been asked to implement a RAID solution on one of your company's servers. You have two hard disks and two hard disk controllers. Which of the following RAID levels could you implement? (Choose the three best answers.) *(2points)*

        A. RAID 0
        B. RAID 1
        C. Disk Duplexing
        D. RAID 10
        E. RAID 5

XI.   Which utility is shown in the following figure (portions of which have been obscured to prevent telegraphing the answer)? *(2points)*
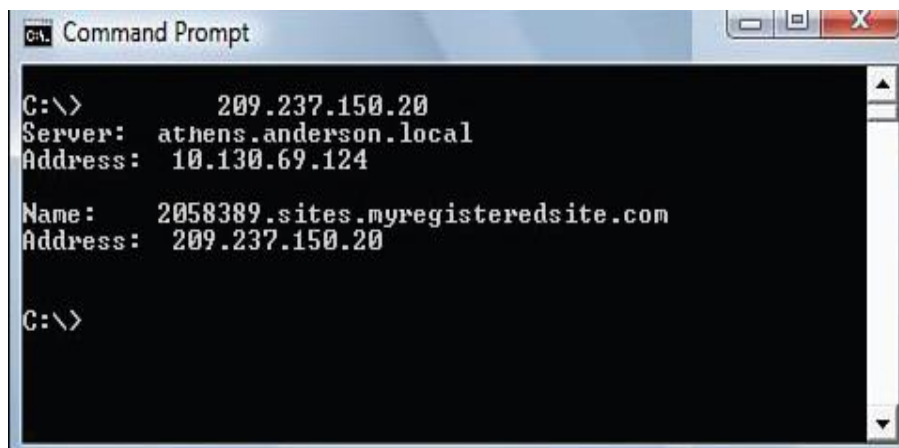
A. ipconfig
B. ifconfig
C. nslookup
D. nbtstat

XII. Which of the following are major requirement considerations when implementing a basic network? (Choose all correct answers.) *(2points)*

A. Security considerations
B. Device types
C. Equipment limitations
D. Compatibility requirements

XIII. Which of the following monitors and controls bandwidth usage allowing administrators to provide customization for the best needs of the network? *(2points)*

A. Firewall
B. Load balancer
C. Packet shaper
D. Content filter

XIV. How many subnets are possible with a Class B address and a subnet mask of 255.255.255.128? *(2points)*

A. 255
B. 256
C. 254
D. 512
E. 510

XV. What is BIOS an acronym for?

A. bootstrap initial operating system
B. basic input output startup
C. boot initial operating startup
D. basic input output system

XVI. What is the default subnet mask for a class C address? *(2points)*

A. 255.0.0.0
B. 255.255.0.0
C. 255.255.255.255
D. 255.255.255.0

XVII. After several passwords have been compromised in your organization, you have been asked to implement a network-wide password policy. Which of the following represents the most practical and secure password policy? *(2points)*

A. Daily password changes
B. Weekly password changes
C. Monthly password changes

D. Password changes only after an account has been compromised

XVIII. Choose the most secure password from the following list. *(2points)*

A. Db3Tu$L
B. klsrmoa
C. NeW UseR
D. Harold

XIX. After a hard disk failure that took a number of hours from which to recover, your manager has instructed you to implement a fault-tolerant solution to reduce the amount of downtime if the same thing happens again. After researching the various options available to you, you decide to use disk striping with parity. What is the minimum number of disks required to implement this solution?

A. 3
B. 2
C. 1
D. 4

XX. Which of the following is an advantage of formatting a Windows server drive as NTFS rather than FAT? *(2points)*

A. With NTFS, tape backups aren't needed.
B. NTFS offers a higher degree of security.
C. NTFS permits the server to be used as a workstation.
D. NTFS eliminates the need for multiple hard drives

XXI. Three servers are scheduled for an upgrade. What do you do first? *(2points)*

A. Install the upgrade on all three servers.
B. Install the upgrade on a test server.
C. Install the upgrade on one server and observe the effects on users.
D. Don't perform the upgrade.

XXII. You have been told to set up a firewall for the company network that will filter TCP ports 10–50. What network services will this action affect? *(2points)*

A. POP3 incoming mail service
B. FTP service
C. SMTP outgoing mail service
D. World Wide Web (WWW) access

XXIII. Your company has recently merged with another company and each has its own VLAN. Users on both VLANs need to communicate with each other. What needs to be installed to make this possible? *(2points)*

E. A router
F. A switch
G. Matching protocols
H. A bridge

XXIV.   Why should all email originating from the Internet be scanned for viruses? *(2points)*

> A. Because Windows operating systems are known for viruses.
> B. Because the Internet is the largest source of viruses.
> C. Because email floods can cripple a server.
> D. Because not all email is encrypted.

XXV.   A network consisting of 50 users is to be modified so that all users will be able to access the Internet. All IP addresses are assigned from a list maintained in Windows servers. The list of IP addresses is well known outside the network. Which of the following is the best security practice for this network? *(2points)*

> A. All messages intended for the Internet are encrypted.
> B. All users are assigned a unique password for accessing the Internet.
> C. The share-level security model is selectively applied to each user.
> D. A firewall is installed at the Internet ports.

=========================== End of Section 1===============================

Section 2: ICT Knowledge
Instruction: Please answers best match to the question, be specific and clear. Additional paper A4 size will be provided on candidate request. **Candidates who wish can answer in French.**

I. *(50points)*

Case study

You have just been selected as an ICT Associate and resume work when UNHCR plans to open a new office in Beni to respond to the emergency in this area. Management at one of the meetings, mentioned that about fifteen staff will be deployed. The ICT Officer being busy in meetings is asking you to make a deployment plan in terms of required equipment which should include:
- ✓ Office equipment (Desktop, Laptop, printer, scanner, landline); multifunctional printers can be chosen;
- ✓ Network equipment (Router, WLC, Switches, AP, etc.);
- ✓ Telecommunication equipment (VHF repeater, VHF base, HF radio base - antenna deployed in H or V- VSAT, etc.). It should be noted that in the absence of the radio operators in the said office, remote radio control and monitoring of staff movements should be possible via another radio room located in another office (in another area);
- ✓ The connectivity system should be redundant as there is a plan to use a local ISP;
- ✓ Beni does not have a local electricity company, the office plans to use a single generator which will be relayed by a batteries-based backup system at night.
- ✓ The new premises has 1 main office and 2 annexes. There is an office for the security guards;
- ✓ You must draw a network diagram illustrating your infrastructure to deploy.

Note: You must justify your choices of each equipment and be clear in your reasoning;

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============================ End of Section 2================================