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FACULTY/COLLEGE	College of Business and Economics
SCHOOL	School of Consumer Intelligence and Applied Information Systems
DEPARTMENT	Applied Information Systems
CAMPUS(ES)	APB
MODULE NAME	SYSTEMS SOFTWARE 1B
MODULE CODE	SSW01B1
SEMESTER	Second
ASSESSMENT OPPORTUNITY, MONTH AND YEAR	Final Summative Assessment Opportunity November 2019

ASSESSMENT DATE	21/11/2019	SESSION	12:30-15:30
ASSESSOR	Dr Patrick Ndayizigamiye		
MODERATOR	Dr Guy Toko		
DURATION	3 hours (180 mins)	TOTAL MARKS	100

NUMBER OF PAGES OF QUESTION PAPER (Including cover page)	13

INFORMATION/INSTRUCTIONS:

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- This is a closed-book assessment.
- Number your answers clearly and correctly as per the question paper.
- Write neatly and legibly on both sides of the paper in the answer book, starting on the first page.

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Section A

[50*0.5]

Multiple Choice
Indicate the answer choice that best completes the statement or answers the question.

1. What command can be used to flush the local DNS cache on a Windows computer?

    a. nslookup -f
    b. ipconfig /flushdns
    c. dns dump
    d. service dns cache restart

2. What type of IP address is configured by a server when a device first initiates a connection to the network?

    a. Default
    b. Dynamic
    c. Static
    d. Configured

3. One way to authenticate users on a computer is to use a small device that contains authentication information. What is this device called?

    a. Retinal scanner
    b. LoJack token
    c. Smart card
    d. TPM

4. Which of the following types of malware self-replicates?

    a. Virus
    b. Worm
    c. Trojan
    d. Rootkit

5. If you suspect corrupted system files are causing issues, what command can be run to search for and replace the corrupted files?

    a. chkdsk /scannow
    b. sfc /scannow
    c. sfc /r
    d. chkdsk /r

6. What device handles access to another network for a client computer if it does not have a better option?

    a. firewall

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b. default gateway

c. network switch

d. network hub

7. When utilizing both share and NTFS permissions, what statement is inaccurate?

a. if both permissions are used, the least restrictive permission between the two applies

b. if NTFS permissions conflict between a user and group the least restrictive permission applies

c. when you copy a file, the file takes on the permissions of the destination folder

d. inherited permissions pass from parent folder to child file or folder

8. What statement about user accounts and groups is NOT true?

a. a user account can belong to only one group at a time

b. by default, standard users accounts belong to the Users group

c. Guest group has limited rights on the system

d. Backup Operators group can restore any files regardless of the group's permissions to those files

9. What protocol makes a connection, checks whether the data is received, and resends it if it is not?

a. TCP

b. UDP

c. IP

d. DNS

10. What is the name of the program that reads the settings in the Boot Configuration Data (BCD) file and manages the initial startup of the OS?

a. MBR program

b. Session Manager program

c. Windows Boot Loader

d. Windows Boot Manager

11. What dynamic link library handles low-level hardware details?

a. Ntoskrnl.exe

b. Smss.exe

c. Hal.dll

d. Winlogon.exe

12. What kind of a computer intercepts requests that a browser makes of a server and can cache received content?

a. DNS server

b. VPN server

c. Proxy server

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     d. Web server

13. What is a valid reason for wanting to configure a proxy server in Internet Explorer?

     a. to increase the security of the connection
     b. to connect to secured websites on a corporate network VPN
     c. to improve website performance
     d. to surf anonymously

14. When working with a workgroup, what statement is accurate regarding which folders to use to hold shared data?

     a. private data for each user should be kept in their C:\Users folder
     b. all users have access to the folders in the C:\Users folder
     c. C:\Users\Public should only be used by the Guest account
     d. Only Administrators and Guest have access to C:\Users\Public

15. Using a PIN or password in addition to TPM is an example of what type of authentication?

     a. multifactor
     b. biometric
     c. asymmetric
     d. symmetric

16. Which of the following types of IPv6 addresses deliver packets to a single node on a network?

     a. anycast address
     b. default gateway address
     c. multicast address
     d. unicast address

17. What command can be used to display IP addresses assigned to all network connections on a system?

     a. msconfig
     b. netstat
     c. ipconfig
     d. netcfg32

18. In order to install multiple network cables that converge in one location such as an electrical closet or server room, what should you use?

     a. patch panel
     b. RJ-45 jack
     c. terminal adapter
     d. loopback port

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19. When attempting to access a remote computer on which your username and password do not exist, what user group will you be placed in?

    a. Administrators

    b. Guests

    c. Backup Operators

    d. Anonymous users

20. What type of device do you need if you want to connect two network segments together such as a wireless network and a wired network?

    a. hub

    b. NAS

    c. repeater

    d. bridge

21. What technology can be used to locate a device such as a laptop after it has been stolen?

    a. Management software

    b. LoJack

    c. Trojan

    d. Multifactor Trace software

22. How are IP addresses available to the Internet classified?

    a. public

    b. private

    c. non-routable

    d. standard

23. Which of the following is true about cable Internet?

    a. you share the cable infrastructure with your neighbours

    b. you need filters on every phone jack

    c. fiber optic cabling is required

    d. provides up to 2.3 Mbps of bandwidth

24. Under the Advanced Boot Options screen, what startup option should be enabled in order to view what did and did not load during the bootup?

    a. Event Viewer

    b. Boot Logging

    c. Safe Mode with Networking

    d. Windows Boot Manager

25. What statement regarding passwords on Windows is accurate?

    a. It is best to write your password down so you don't get locked out of your computer.

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b. passwords cannot be longer than 14 characters.

c. by default, accounts with a blank password cannot logon remotely.

d. letters and numbers are allowed, but no symbols such as '@' or '!'.

26. What type of device can be used to block unwanted traffic initiated from the Internet and can also restrict Internet access from an internal network?

   a. hub

   b. switch

   c. firewall

   d. VPN

27. If you want your computer to be protected by BitLocker Encryption using computer authentication, what feature must your computer have?

   a. a USB port

   b. an authentication key on the hard drive

   c. a TPM chip on the motherboard

   d. a PIN on the BIOS

28. If the computer you are using is a laptop that moves from one network to another, what tab can be used to configure a secondary configuration, such as a static IP if a DHCP server cannot be reached?

   a. General Configuration

   b. Alternate Configuration

   c. Secondary Configuration

   d. Fallback Configuration

29. Regarding the use of Group Policy, what statement is NOT accurate?

   a. policies can be applied to a computer

   b. all policies are applied before the logon screen appears

   c. Group Policy is available in Windows Professional edition

   d. you can set the QoS level for an application using Group Policy

30. What type of network device keeps a table of the MAC addresses of the devices connected to it?

   a. Hub

   b. Router

   c. NIC

   d. Switch

31. What is the file name given to the Windows kernel?

   a. Kern.sys

   b. Ntoskrnl.exe

   c. Hal.dll

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d. Winkernel.exe

32. If you are experiencing issues reaching a target destination network, and you need to to display each hop to the destination, what command should you use?

    a. ipconfig

    b. ifconfig

    c. tracert

    d. nslookup

33. What Windows process is responsible for authenticating users?

    a. Lsass.exe

    b. Smss.exe

    c. Csrss.exe

    d. Ntoskrnl.exe

34. When an attacker presents a program or himself as someone else to obtain private information and pretends to be a legitimate website, network, FTP site, or person in a chat session, what type of attack is occurring?

    a. rootkit

    b. zombie

    c. brute-force

    d. man-in-the-middle

35. Why are there twists in the wires that are used for network cabling?

    a. the twists increase the cable strength

    b. the twists reduce crosstalk

    c. the twists make it easier to punchdown the cable

    d. the twists reduce the amount of copper needed

36. Which Windows utility program lists errors and issues that need attention?

    a. Action Center

    b. Control Panel

    c. System Information Windows

    d. Network and Sharing Center

37. Which of the following describes online resources and services that are shared between multiple organizations, but not available publicly?

    a. Personal cloud

    b. Hidden cloud

    c. Patterned cloud

    d. Community Cloud

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38. Which of the following describes an open-ended cloud computing service that can provide any combination of functions depending on a customer's exact needs?

    a. XaaS

    b. Saar

    c. SpaS

    d. SaaS

39. Anti-malware software relies on what sort of update in order to define or detect malware as it gets into the wild?

    a. rootkits
    b. malware signatures
    c. static updates
    d. Windows updates

40. If you want to be able to power up a computer remotely, what feature should you enable?

    a. QoS
    b. RDP
    c. RemoteApp
    d. Wake-on LAN

41. What command that can be used to manage hard drives, partitions, and volumes?

    a. wpeinit
    b. bootrec
    c. bdcedit
    d. diskpart

42. What command can be used to check for file system errors?

    a. System Restore
    b. MSconfig
    c. sfc /scannow
    d. chkdsk /r

43. When using the Windows Encrypted File System, what statement is accurate?

    a. files can be marked for encryption, but not folders
    b. an encrypted file moved to an unencrypted folder remains encrypted
    c. EFS only works on NTFS and FAT32
    d. you need to download special software to use EFS

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44. If a device does not receive an IP address from a DHCP server, the device may resort to what kind of IP address?

    a. APIPA

    b. random IP address

    c. public IP address

    d. dynamic IP address

45. When mapping a drive, you can type in the path to the shared folder on the host computer. What is the syntax for the path?

    a. \\sharedfolder\server

    b. \server\sharedfolder

    c. \\server\sharedfolder

    d. /sharedfolder/server

46. Which of the following helps identify the network portion and the host portion of an IP address?

    a. dynamic address

    b. DHCP address

    c. default gateway

    d. subnet mask

47. What command can be issued within Windows RE to enable networking?

    a. ifconfig start

    b. netconf load

    c. wpeinit

    d. netsh if up

48. Which of the following is a solution for securing private data traveling over a public network, such as the Internet?

    a. public encrypted network

    b. virtual private network

    c. Private hidden network

    d. virtual prevention network

49. Which of the following is NOT true about Remote Desktop?

    a. the client can be running any version of Windows 7

    b. by default all users can access Remote Desktop

    c. Windows firewall can block Remote Desktop connections

    d. you can start the remote desktop client using the mstsc command

50. What protocol must be supported by routers in order to utilize Remote Assistance Easy Connect?

    a. SMTP

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 b. PNRP
 c. SNMP
 d. LDAP

Section B

[25*1]

Matching

Match each item with a statement below.

a. Subnet mask
b. DHCP server
c. Lightweight Directory Access Protocol (LDAP)
d. ipconfig
e. Workgroup
f. Secure Shell (SSH)
g. Fully Qualified Domain Name (FQDN)
h. Network Address Translation (NAT)
i. Wi-Fi protected Setups (WPS)
j. Virtual private network

1. assigns an IP address to a computer when it first attempts to initiate a connection to the network

2. a command that can be used to display the TCP/IP configuration

3. a technique designed to conserve the number of public IP addresses needed by a network

4. commonly used by Linux to pass sign-in information to a remote computer and control that computer over a network

5. a protocol used by various client applications when the application needs to query a database

6. designed to make it easier for users to connect their computers to a wireless network when a hard-to-remember SSID and security key are used

7. identifies a computer and the network to which it belongs, such as www.cengage.com

8. Protects data by encrypting it from the time it leaves a remote computer until it reaches a server on a corporate network, using a technique called tunnelling

9. A group of computers on a peer-to-peer network that are sharing resources

10. Used by a computer or other device to determine if an IP address of another computer is on its network or another network

_____

Match each item with a statement below.

a. hypervisor
b. thin client
c. dump
d. client-side virtualization
e. clone
f. bash shell
g. Spotlight
h. Finder
i. presentation virtualization
j. vi editor

11. a collection of data that is copied to a backup media

12. a personal computer that provides multiple virtual environments for applications

13. functions similar to File Explorer in Windows, used to find and access Mac's files and applications

14. software that is installed on a computer and used to manage virtual machines

15. an image of the entire partition on which an operating system is installed

16. a remote application running on a server is controlled by a local computer

17. a text editor that works in command mode or insert mode

18. stands for Bourne Again Shell

19. a computer that has an operating system, but has little computing power and might only need to support a browser used to communicate with the server

20. the search app for Mac, can be configured to search the local computer, Wikipedia, iTunes, the Maps app, the web, and more

Match each item with a statement below.

a. IMSI
b. IMEI
c. accelerometer
d. pairing

_____

e. iOS

21. a unique number that identifies a cellular subscription for a device or subscriber, along with its home country and mobile network

22. a unique number that identifies each mobile phone or tablet device worldwide

23. a device used in mobile devices to sense the physical position of the device

24. the process of connecting with another Bluetooth device

25. an OS by Google that is based on Linux and is used on smart phones and tablets

Section C

[50]

Short Answers

1. Convert the following IP addresses to their corresponding binary numbers. You must show all the steps that you took to arrive at the final answer   [**10**]

     a. 192.168.59
     b. 192.168.5.2
     c. 192.168.20.46
     d. 192.168.1.5

2. Convert the following Hexadecimal numbers to decimal numbers. You must show all the steps that you took to arrive at the final answer   [**10**]

     a. D3E5C
     b. AB09
     c. F7D
     d. 7DE

3. Describe how a computer with a Private IP address accesses the Internet.   **[3]**

4. You have received a "No boot device found" notification upon booting your system. What does this mean, and what can you do to troubleshoot it?

[4]

5. List the five elements that define cloud computing services

[5]

6. If you are having a problem changing the permissions of a folder that was created by another user, what can you do to help solve the problem?

[4]

7. Define and explain the differences between a virus, worm, and Trojan

[6]

8. What are the 2 techniques that can be used so that sensitive company data on an employee's personal mobile device is not stolen when the device is stolen?

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[4]

9. Name two tunneling protocols that are used for IPv6 packets to travel over an IPv4 network.

[4]