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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 1A
MODULE CODE	SSW01A1
SEMESTER	First
ASSESSMENT OPPORTUNITY, MONTH AND YEAR	Final Summative Assessment Opportunity June 2019

ASSESSMENT DATE	06/06/2019	SESSION	12:30-15:30
ASSESSOR	Dr Patrick Ndayizigamiye		
MODERATOR	Dr Guy Toko		
DURATION	3 hours (180 min)	TOTAL MARKS	100

NUMBER OF PAGES OF QUESTION PAPER (Including cover page)	14

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

[25*0.5]

True / False
Indicate whether the statement is true or false.

1. A 32-bit driver can be used in a 64-bit operating system.
    a. True
    b. False

2. If you need to recover data from a system that does not boot, you should install the drive in a working system.
    a. True
    b. False

3. The read/write head on a magnetic hard drive is at both the top and bottom of each disk.
    a. True
    b. False

4. Motherboards contain only a single bus for I/O, video, and data.
    a. True
    b. False

5. A hard drive can only have one single root directory.
    a. True
    b. False

6. The most popular motherboard form factors are ATX, microATX, and X-ITX.
    a. True
    b. False

7. A LoJack is a buffer zone between the CPU and the motherboard
    a. True
    b. False

8. Every installed device requires a device driver to control the device.
    a. True
    b. False

9. The Windows 8 interface is known as the Aero interface.
    a. True
    b. False

10. The two major manufacturers of processors are Intel and NVIDIA.

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a. True

b. False

11. Today's DIMMs use a 64-bit data path.
    a. True
    b. False

12. Multiple processors can be installed in a single processor housing.
    a. True
    b. False

13. The BIOS settings displays hard drive and optical drive information amongst others
    a. True
    b. False

14. The chipset embedded on the motherboard determines what kind of processor and memory the board can support
    a. True
    b. False

15. A computer must have a DVD drive in order to install Windows 8.
    a. True
    b. False

16. To flash the BIOS settings, you can use a utility program in Windows, a USB flash drive, or a CALIS software.
    a. True
    b. False

17. The Master Boot Record (MBR) method is limited to 2 TB drives.
    a. True
    b. False

18. The QuickPath Interconnect is part of the Nehalem chipsets.
    a. True
    b. False

19. A ball grid array is soldered to the motherboard.
    a. True
    b. False

20. The SATA drive technology utilizes a serial data path.
    a. True
    b. False

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21. The GUID Partition Table (GPT) method for partitioning a drive allows up to 128 partitions.
    a. True
    b. False

22. Using Windows 7 Backup and Restore, you can back up the volume on which Windows is installed.
    a. True
    b. False

23. A KVM switch allows you to use one monitor, mouse, and keyboard for multiple computers.
    a. True
    b. False

24. Defragmenting is not recommended for solid-state hard drives.
    a. True
    b. False

25. The 2.5" size hard drive is typically used in devices such as MP3 players.
    a. True
    b. False

Section B

[50*0.5]

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

1. The ability to snap a page to the left or right side of the screen so a second page can share the screen is a function of what feature?
    a. Aero
    b. App multitasking
    c. side-by-side apps
    d. app tiling

2. 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

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3. When installing a new device, which statement is accurate?
    a. a mouse may not require an additional device driver installation
    b. Vista drivers never work with Windows 7
    c. 32-bit drivers can be installed in a 64-bit OS
    d. 64-bit drivers can be installed in a 32-bit OS

4. Which of the following best describes a Pin Grid Array (PGA) socket?

    a. It has blunt protruding pins on the socket that connect with lands or pads on the bottom of the processor
    b. It has holes aligned in uniform rows around the socket to receive the pins on the bottom of the processor
    c. It does not fit on any motherboard
    d. It is not currently used in modern computers

5. What is the maximum cache or buffer size for magnetic drives?
    a. 2 MB
    b. 128 MB
    c. 256 MB
    d. 512 MB

6. What does a single beep or no beep imply during the start-up of a computer?
    a. a video problem
    b. a memory error
    c. all POST tests passed
    d. a keyboard controller problem

7. What command can be used to launch the System Information window?
    a. msinfo32.exe
    b. sysinfo.exe
    c. info32.exe
    d. msconfig.exe

8. When populating a motherboard with DIMM modules, what configuration option will not work?
    a. using two different manufacturer's memory
    b. mixing memory speeds
    c. leaving a slot unpopulated
    d. mixing unbuffered with registered memory

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9. What diagnostic software is used by several manufacturers, and can run tests on keyboards, video, speakers, touchpad, optical drives, wireless LANs, motherboard, processor, ports, hard drive, and memory?
    a. PC-Fixit
    b. DiagNow
    c. PC-Doctor
    d. WinScan

10. What type of RAID is a combination of mirroring and striping?
    a. RAID0
    b. RAID1
    c. RAID5
    d. RAID10

11. Which of the following factors affect the performance of a hard drive?
    a. The interface standard
    b. RAM
    c. CMOS
    d. BIOS/UEFI

12. What is the other name for the notification area in Windows?
    a. system tray
    b. taskbar
    c. Control Panel
    d. Start Menu

13. What is a snapshot of the system settings and configuration called?
    a. rollback point
    b. restore unit
    c. rollback unit
    d. restore point

14. Which statement regarding hard drives is incorrect?
    a. the 3.5" size is typically used in desktops
    b. a solid state drive has no moving parts
    c. solid state drives are less expensive than magnetic hard drives
    d. tracks on a hard drive are divided into sectors

15. In a cellular network, each cell is controlled by a tower. What are these towers called?
    a. cell controllers
    b. cell hubs
    c. base controllers
    d. base stations

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16. Which of the following statements best describes a RAID 5?
    a. data from one drive is mirrored to another
    b. it improves performance but not fault tolerance
    c. it requires 3 or more drives and uses parity checking
    d. it takes at least four disks and data is striped and mirrored

17. Programs and data that are stored on a motherboard are referred to by what term?
    a. firmware
    b. package
    c. blob
    d. instruction set

18. When removing screws while working on a laptop, what should be done with the screws?
    a. They should be disposed of
    b. They should be left inside the case of the laptop
    c. They should be stored or labeled
    d. They should be painted to indicate where they go

19. Which of the following best describes an external enclosure?
    a. It makes it easy to expand the storage capacity of a single computer
    b. For Network Attached Storage (NAS), the enclosure connects to the network using a USB port
    c. When the storage is used by a single computer, the connection is made using an Ethernet port
    d. hard drives inside the enclosure do not use a SATA connection

20. When a static image stays on a monitor for many hours leaving a permanent impression of that image on the monitor, what term is used to describe the condition?
    a. image cling
    b. burn-in
    c. screen blanking
    d. screen freezing

21. What is the most common pointing device on laptops?
    a. a touch pad
    b. a mouse
    c. a touch screen
    d. a trackball

22. What is the name used to describe the overall structure the Operating System (OS) uses to name, store, and organize files on a drive.
    a. System sequence
    b. System hierarchy
    c. System volume
    d. File system

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23. Where should you clip your ESD strap when opening a computer case?
   a. power supply
   b. computer case
   c. electrical outlet
   d. the floor

24. Which statement is NOT true regarding motherboards?
   a. also called a system board
   b. has a CPU socket
   c. has a heat sink on the PCIe slots
   d. has slots for DIMMs

25. Which of the following statements regarding working inside a laptop computer is true?
   a. When upgrading a laptop, you should use components that are the same brand
      as the laptop, or use only recommended components.
   b. If an internal component needs replacing, you should always replace the
      component rather than disable it.
   c. Repairing a laptop is always more cost effective than buying a new one.
   d. The LCD screen of a laptop is never considered to be a field replaceable unit.

26. What Intel processor technology interconnects the processor, chipset, and wireless
network adapter as a unit, improving laptop performance?
   a. Pentium
   b. Core i5
   c. Celeron
   d. Centrino

27. Where do today's computers store almost all motherboard configuration data?
   a. BIOS ROM
   b. CMOS RAM
   c. DIMM RAM
   d. Solid State Disk

28. If you suspect your system is overheating, how can you determine the CPU
temperature?
   a. in Windows, go to System Information
   b. the CPU has a temperature display screen
   c. press a room thermometer on the top of the CPU
   d. go into UEFI/BIOS setup and find the temperature monitors for the system

29. What is the name for the 3D user interface provided by Windows 7 and Vista?
   a. Glass
   b. Aero
   c. Air
   d. Shield

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30. What component of UEFI helps to prevent malware from hijacking a system during or before the operating system load?
    a. Execute Disable Bit

    b. Secure Boot

    c. UEFI Defender

    d. Bootlocker

31. Which setting can be configured using the BIOS screen?
    a. Windows driver status

    b. set desktop background

    c. screen saver timeout value

    d. change the boot sequence

32. What has occurred if you see the message "Chassis Intruded! System has halted." the next time you start your computer?
    a. the disk has failed

    b. Windows has not been activated

    c. the case has been opened

    d. the keyboard has been unplugged

33. If you are adding a hard drive to a system that already has a drive with Windows installed on it, what should you do?
    a. you should boot from the Windows setup DVD to prepare the new drive

    b. boot Windows and use Disk Management to prepare the new drive

    c. use the BIOS setup screen to partition and format the new drive

    d. check that the new hard drive must use the same standard as the Windows drive

34. What term describes one or more characters following the last period in a filename, such as .exe, .txt, or .avi?
    a. filename

    b. file extension

    c. file version

    d. file type

35. What term refers to horizontally torn images on a screen, which occur when the video feed from the video controller gets out of sync with the refresh rate of the monitor?
    a. burn-in

    b. left-ins

    c. rips

    d. artifacts

36. What is the second step in opening the case of a working computer?
    a. press and hold down the power button for a moment

    b. back up important data

    c. power down the system and unplug it

    d. open the case cover

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37. What is the very first step that should be taken when performing work with a computer?
   a. You should back up any important data
   b. You should ground yourself
   c. The components should be removed
   d. You should power down the system and unplug it.

38. What should you install in a server room that will save space by allowing you to control multiple servers with a single mouse, keyboard, and monitor?
   a. a MIDI connector
   b. a digitizer
   c. biometric device
   d. a KVM switch

39. When working on a computer, why should you consider the power supply and the monitor as black boxes?
   a. Because it is very difficult to fix them
   b. Because they are normally painted in black so that no one touches them
   c. Because they may contain enough power to kill you, especially if they are faulty
   d. Because they are normally carried in black boxes to hide them from hackers

40. A micro-ATX motherboard will fit into a case that follows what minimum standard?
   a. ATX 1.0
   b. ATX 1.5
   c. ATX 2.0
   d. ATX 2.1

41. What component of a processor holds instructions waiting to be processed by the ALU?
   a. register
   b. bus
   c. internal memory cache
   d. control unit

42. What might be the cause of a black screen right after you install a new video card?
   a. no video card is detected
   b. the onboard video is not disabled in BIOS
   c. you installed the video card in the wrong slot
   d. the video card has insufficient RAM

43. When is it allowed to touch the inside of a computer that is turned on?
   a. When disassembling the computer
   b. When using a multimeter to measure voltage output
   c. When reassembling the computer

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    d. When a qualified electrician is present

44. Which of the following is used to uniquely identify a computer on a network?
    a. network ID
    b. ARP address
    c. IP address
    d. Serial number

45. What is the name of the interface that uses graphics as compared to a command-driven interface?
    a. text-based interface
    b. menu-based interface
    c. common user interface
    d. graphical user interface

46. What is the fourth partition on a hard drive called?
    a. extended partition
    b. master boot record
    c. volume
    d. primary partition

47. What is Pagefile.sys used for in Windows?
    a. system file storage
    b. to store E-books
    c. video RAM
    d. virtual memory

48. Which of the following best describes the P1 power connector?
    a. It powers up the graphics card only
    b. It powers up the CPU only
    c. It powers up the RAM only
    d. It ignites the entire motherboard

49. Which of the following is NOT a solution to an overheating problem?
    a. verify that cables are not obstructing airflow
    b. remove the covers from empty expansion slots
    c. be sure the case is not sitting on a carpet
    d. remove dust from the power supply, vents, and cooler fans

50. Where can the Execute Disable Bit (EDB) technology be disabled?
    a. In the EDB configuration software.
    b. In the BIOS / UEFI setup screen
    c. In the Windows Device Driver screen
    d. In the Windows command line EDB utility

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Section C

[25*1]

Matching

Match each item with a statement below.
a. System window
b. Device drivers
c. gadget
d. Navigation pane
e. OneDrive
f. Desktop
g. Action Center
h. Network and Sharing center
i. Compressed folder
j. Child directory

1. a mini-app that provides information such as the time, date, news headlines, or weather.

2. Can give you a quick look at what hardware and software is installed

3. The initial screen that is displayed when an OS has a GUI interface loaded

4. A tool that lists errors and issues that need attention

5. Creates a folder with a .zip extension

6. A directory that is housed inside another a directory

7. A utility that can be used to solve a failed network connection

8. A Microsoft online storage service

9. Small programs stored on the hard drive that tell the computer how to communicate with a specific hardware device

10. Found on the left side of the Windows Explorer or Computer window

_____

Match each item with a statement below.
a. lithium ion
b. BSOD
c. Memory Diagnostics
d. Windows pinwheel
e. heat sink
f. sheet battery
g. dual rail
h. driver store
i. CAG
j. UPS

11. indicates that the system is waiting for a response from a program or device

12. Windows errors that are caused by problems with devices, device drivers, or a corrupted Windows installation

13. a component made of metal that is designed to draw heat away from a processor into the fins

14. a round air duct that helps direct air to the processor

15. a power supply with a second +12v rail

16. a location where Windows keeps a copy of driver software

17. a device that provides battery power when the main power source goes out

18. a component that fits on the bottom of a laptop that can improve charge times and increase time between charges

19. the technology most commonly used by battery packs

20. a tool in Windows 8/7/Vista that tests memory

Match each item with a statement below.
a. virtualization
b. data bus
c. chipset
d. CMOS battery
e. wait state
f. Front Side Bus
g. riser card
h. jumper
i. protocol

_____

j. system clock

21. a set of components on the motherboard that work closely with the processor to control the memory, buses, and peripherals

22. If disconnected, this component causes setup information in the CMOS to be lost.

23. the system of pathways used for communication which carry data

24. also called the host bus, this is a 64-bit bus that connects the north bridge to the processor

25. two small posts or metal pins on the motherboard that are either open or closed

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Section D

[37.5]

Subjective Short Answer

1. Describe the three levels of cache used by a processor.

[3]

2. What is the purpose of the chipset on a motherboard?

[2.5]

3. There are five questions that you should answer before adding memory to a system. List three of those five.

[5]

4. Why are motherboards installed in the case using spacers?

[4]

5. There are nine features that affect performance and compatibility of a processor with the motherboard. List four of them.

[4]

6. Describe the function of the system clock.

[4]

7. List and describe three front panel connectors you will likely see connected from the front panel to the motherboard.

[4]

8. List the four major categories of memory modules and mention how they are used today.

[4]

9. What is the first step you should perform before working inside the case of a working computer?

[4]

10. What are three tips you should keep in mind before beginning work inside a computer case?

[3]