



**DIPLOMA IN DATA MANAGEMENT AND ANALYTICS (DDMA)**

**DIPLOMA IN COMPUTER NETWORKS AND SYSTEMS ADMINISTRATION (DCNSA)**

**LEVEL I**

**INFORMATION SYSTEMS SUPPORT AND INTEGRATION**

**THURSDAY: 4 December 2025. Morning Paper.**

**Time Allowed: 2 hours.**

**This paper consists of fifty (50) Multiple Choice Questions. Answer ALL questions by indicating the letter (A, B, C or D) that represents the correct answer. Each question is allocated two (2) marks.**

1. A computer hardware technician is explaining the key components inside a PC to a group of trainees. Which one of the following components is considered core in a computer?
  - A. A screwdriver
  - B. The system unit
  - C. A multimeter
  - D. Contact cleaner(2 marks)
2. During a routine maintenance session, a technician is cleaning the inside of a computer system. Which one of the following statements **BEST** explains why foam swabs are recommended for cleaning computer components?
  - A. They are much more affordable compared to standard lint-free cotton swabs
  - B. They are safely used in combination with virtually any cleaning chemical
  - C. They are specifically designed to prevent the release of any lint or loose fibers
  - D. They are the only effective tool available for thoroughly removing dust(2 marks)
3. A user reports that their desktop computer shuts down unexpectedly. It's suspected to be a faulty power supply unit. Which one of the following tools is **MOST** appropriate for a preliminary diagnosis of this electrical issue?
  - A. Memory module tester
  - B. Phillips head screwdriver
  - C. Diagnostic software
  - D. A multimeter(2 marks)
4. While replacing a defective component, a user follows standard safety procedures and disconnects the power cable, then presses the power button for a few seconds. The primary purpose of this procedure is to \_\_\_\_\_.
  - A. clear the system's BIOS settings and force a complete new hardware check upon rebooting
  - B. discharge any residual electrical charge that may be stored within the system's capacitors
  - C. verify that the power button is functioning correctly after the physical component has been replaced
  - D. safely unmount the hard drives and other storage devices before opening the system's enclosure(2 marks)
5. During computer repair, wearing an anti-static wrist strap connected to a grounding point is recommended. Which one of the following statements **BEST** explains the purpose of this safety measure?
  - A. It ensures the technician's hands are free of any harmful chemicals or corrosive cleaning agents.
  - B. It insulates the technician from high-voltage currents, thus protecting them from serious electrical shocks
  - C. It provides a direct path for any accumulated static electricity to be safely discharged away from components
  - D. It allows for a more secure grip on delicate components, which prevents technicians from dropping the(2 marks)

6. A staff is cleaning a heavily dust-covered circuit board with several fragile, surface-mounted components. Which one of the following tools is preferred to avoid causing physical damage during cleaning?
- A. A can of compressed air
  - B. A foaming cleaning solution
  - C. A soft-bristle brush
  - D. An isopropyl alcohol spray
- (2 marks)
7. While servicing a laptop, a technician needs to clean tight spaces near the CPU socket without damaging nearby components. In which situation would a foam swab be most effectively used?
- A. Cleaning large flat surfaces like the lid or the bottom panel of the device
  - B. Scrubbing stubborn dirt from a heat sink's cooling fins and at the base
  - C. Wiping down a large circuit board to remove accumulated dirt and grime
  - D. Cleaning the small, tight spaces around a motherboard's CPU socket
- (2 marks)
8. A server is experiencing random reboots despite several software fixes. To test the integrity of the volatile memory, which one of the following tools would be most effective?
- A. Power supply tester
  - B. Diagnostic software suite
  - C. Memory module tester
  - D. Multimeter test kit
- (2 marks)
9. An IT student is studying the components of information systems. Which one of the following statements **BEST** describes "communication devices"?
- A. They are peripherals that enable a computer to both transmit and receive data over a network.
  - B. They are always internal components used solely for the storage and retrieval of program data.
  - C. They are components that operate using only digital signals to control a system's internal functions.
  - D. They are peripherals that are solely powered by external sources and are never installed within a device
- (2 marks)
10. A systems administrator is setting up new office equipment and needs a peripheral that can function as both input and output. Which one of the following devices meets this requirement?
- A. Digital scanner
  - B. Smart monitor
  - C. Optical mouse
  - D. Digital microphone
- (2 marks)
11. During CPU installation, the processor was aligned into its specific slot on the motherboard. The primary purpose of the socket is to \_\_\_\_\_.
- A. house the CPU and regulate the flow of data from all storage devices
  - B. act as a direct interface to the system's hard drives and solid-state drives
  - C. prevent the processor from overheating by providing a constant flow of liquid coolant
  - D. provide a secure physical connection and an electrical interface for the CPU
- (2 marks)
12. While cleaning an LCD monitor, Juma wants to avoid causing permanent screen damage. Which one of the following procedures should he follow?
- A. Use a dry paper towel to wipe the display and ensure no streaks or smudges remain
  - B. Apply a standard glass cleaner directly onto the display to remove all accumulated dirt
  - C. Use a soft lint-free cloth with a non-ammonia solution to gently clean the display
  - D. Scrub the monitor display with a microfiber cloth and a strong foaming cleaner
- (2 marks)
13. When upgrading a computer's Random-Access Memory (RAM), which one of the following compatibility factors is most crucial to ensure the new modules will work properly?
- A. The brand of the new RAM must match the brand of the computer's existing RAM
  - B. The RAM's physical size and voltage must be compatible with the motherboard
  - C. The RAM's speed must be exactly the same as the computer's hard drive speed
  - D. The RAM must be installed in a specific order in the slots to ensure proper booting
- (2 marks)
14. A user requires assistance with a technical issue but wants real-time help without waiting for an on-site help. Which method of computer support allows a specialist to assist via chat or video call?
- A. Help desk
  - B. Peer support
  - C. Online support
  - D. Physical support
- (2 marks)

15. An employee who spends long hours working on a computer begins to experience discomfort. Which one of the following is a potential health and safety issue related to prolonged computer use?
- A. Improved hand-eye coordination
  - B. Reduced risk of repetitive strain injury
  - C. Enhanced posture and muscle tone
  - D. Eyestrain and back pain
- (2 marks)
16. An organisation includes user training in its ICT support program. The primary purpose of this training is to \_\_\_\_\_.
- A. reduce the number of help desk agents available for user support
  - B. improve user skills and minimise reliance on continuous assistance
  - C. increase the complexity involved in performing software updates
  - D. make the computer system more difficult for end users to operate
- (2 marks)
17. A user seeks help from a coworker who has similar technical experience to resolve an IT issue. What type of support is being demonstrated in this scenario?
- A. Help desk support
  - B. External support
  - C. Peer support
  - D. Online support
- (2 marks)
18. An IT department has a help desk in place. Which one of the following BEST describes its primary function?
- A. Managing and maintaining regular system backups
  - B. Handling user queries and resolving technical issues
  - C. Developing and programming new software applications
  - D. Conducting and performing detailed security audits
- (2 marks)
19. A company wants to reduce workplace injuries caused by improper computer setups. Which one of the following types of problems can be prevented by applying ergonomics in ICT support?
- A. Problems related to unexpected network outages
  - B. Problems resulting from harmful malware infections
  - C. Problems associated with health and safety issues
  - D. Problems caused by unplanned loss of stored data
- (2 marks)
20. A helpdesk employee is diagnosing a computer with recurring system errors. Which one of the following tools would **BEST** help identify the fault in the system?
- A. A diagnostic program used for checking system logs
  - B. A multimeter used for testing electrical circuits
  - C. A soldering iron used for repairing circuit boards
  - D. A cable tester used for verifying network connections
- (2 marks)
21. When performing regular computer maintenance, which one of the following activities is considered a form of preventive maintenance?
- A. Replacing a broken power supply component
  - B. Running a disk defragmentation utility tool
  - C. Reinstalling the existing operating system
  - D. Swapping out a faulty graphics adapter card
- (2 marks)
22. A help desk technician follows a structured troubleshooting approach to solve user issues. Which one of the following represents the correct logical sequence of steps?
- A. Identify problem → Document results → Implement solution → Test theory → Establish cause → Verify system
  - B. Establish cause → Identify problem → Document results → Implement solution → Verify system → Test theory
  - C. Verify system → Implement solution → Identify problem → Document results → Establish cause → Test theory
  - D. Identify problem → Establish cause → Test theory → Implement solution → Verify system → Document results
- (2 marks)

23. A systems administrator monitors network performance to detect issues before they cause downtime. Which one of the following **BEST** illustrates proactive maintenance?
- A. Monitoring system performance metrics to predict potential failures
  - B. Replacing a malfunctioning hard drive after repeated system crashes
  - C. Reinstalling the operating system following major corruption issues
  - D. Recovering user data after an unexpected hardware malfunction
- (2 marks)
24. While troubleshooting a slow-running computer, Sally decides to check the hard drive for errors. Which one of the following tools should be used?
- A. A voltage meter
  - B. A cable crimper
  - C. Disk repair utility
  - D. Thermal paste applicator
- (2 marks)
25. Documenting each step during the troubleshooting of a recurring system issue is important. Which one of the following **BEST** explains the reason for documenting?
- A. To ensure that repeated issues can be resolved more efficiently in the future
  - B. To reduce the overall number of hardware components in the computer system
  - C. To guarantee that software updates are always installed automatically on time
  - D. To make the operating system permanently resistant to all security threats
- (2 marks)
26. An organisation categorises its data according to security sensitivity. Which one of the following **BEST** differentiates confidential data from restricted data?
- A. Confidential data requires basic protection controls, while restricted data requires no protection measures
  - B. Confidential data may be shared openly with the public, while restricted data is limited to internal use only
  - C. Confidential data causes minimal impact if disclosed, while restricted data could lead to severe organisational harm
  - D. Confidential data is always encrypted automatically, while restricted data never requires encryption
- (2 marks)
27. A network administrator is setting up user accounts with specific permissions. Which one of the following statements **BEST** describes the function of authorisation in information security?
- A. To grant users access only to the resources they are permitted to use
  - B. To encrypt sensitive data so that it remains unreadable to outsiders
  - C. To confirm the legitimacy of users through their login credentials
  - D. To erase outdated information that is no longer required for storage
- (2 marks)
28. An IT professional is implementing data protection controls on company storage devices. Which one of the following describes the key difference between “deletions” and “erasure”?
- A. Deletion is a permanent removal, while erasure is temporary
  - B. Erasure is a logical deletion, while deletion is a physical overwrite
  - C. Erasure only works on solid-state drives, while deletion works on hard drives
  - D. Deletion is a logical removal, while erasure is a permanent overwrite
- (2 marks)
29. A data protection officer is tasked with protecting sensitive customer records during testing. Which one of the following **BEST** describes the purpose of data masking?
- A. To recover lost information from a corrupted storage drive
  - B. To encrypt confidential data for secure online transmission
  - C. To create a realistic but fake version of sensitive information
  - D. To control which authorised users can access specific document
- (2 marks)
30. In an organisation, certain data is available to all employees but not to the general public. This data is classified as \_\_\_\_\_.
- A. Public data
  - B. Internal data
  - C. Confidential data
  - D. Restricted data
- (2 marks)

31. A network administrator needs to choose a backup method that completes quickly and uses minimal storage space. Which one of the following methods **BEST** meets these requirements?
- A. Incremental backup
  - B. Differential backup
  - C. Full backup
  - D. Archive backup
- (2 marks)
32. A systems administrator wants users to have control over who can access their own files by assigning permissions. Which access control model supports this flexibility?
- A. Mandatory Access Control
  - B. Rule-Based Access Control
  - C. Discretionary Access Control
  - D. Role-Based Access Control
- (2 marks)
33. While inspecting a desktop motherboard, a technician notices strange behavior and suspects capacitor damage. A common physical symptom of a faulty capacitor is \_\_\_\_\_.
- A. A bent processor pin on the central processing unit
  - B. A bulging or swollen top on the affected capacitor
  - C. A computer system that frequently restarts randomly
  - D. A power supply unit that completely fails to turn on
- (2 marks)
34. A desktop computer fails to boot after powering on. Which one of the following steps should be taken **FIRST** to isolate the cause of the problem?
- A. Performing a minimal boot setup with only essential components
  - B. Replacing all of the existing power supply cables immediately
  - C. Updating the system BIOS to the most recent available version
  - D. Replacing the central processing unit with a different processor
- (2 marks)
35. An electronics recycling center wants to maximise resource reuse in line with circular economy principles. Which one of the following e-waste management strategies provides the highest value retention?
- A. Landfilling and disposal of non-hazardous electronic parts
  - B. Disassembly and reuse of functional computer components
  - C. Material recycling and recovery of valuable raw metals
  - D. Incineration of e-waste components for limited energy use
- (2 marks)
36. An enterprise with decentralised systems wants to enable communication between loosely coupled applications using asynchronous messaging. Which integration approach is **MOST** suitable?
- A. Enterprise Application Integration framework
  - B. Service-Oriented Architecture model
  - C. Point-to-Point Integration approach
  - D. Data Integration methodology
- (2 marks)
37. A company with many interconnected applications is considering replacing its point-to-point integration setup. Which one of the following is a major limitation of the point-to-point method in large enterprises?
- A. Increases system complexity as the number of applications grows
  - B. Enhances scalability by centralising communication through a hub
  - C. Improves maintainability by enforcing standardized interfaces
  - D. Reduces dependency on custom coding and manual configuration
- (2 marks)
38. An IT architect proposes the use of middleware to connect several enterprise applications. Which one of the following is a benefit of using middleware in this context?
- A. Guarantees zero latency by enforcing synchronous communication across all systems
  - B. Provides flexibility by decoupling applications and enabling easier system upgrades
  - C. Eliminates the need for any message translation between heterogeneous platforms
  - D. Ensures integration is limited to applications built on identical technology stacks
- (2 marks)
39. A data center is planning to store large datasets that will be accessed infrequently but must be retained long-term. Which storage technology is **MOST** appropriate?
- A. Flash memory cards
  - B. Solid-State Drives
  - C. Magnetic tape drives
  - D. High-speed NVMe SSDs
- (2 marks)

40. An IT staff is assembling a new desktop PC and is preparing to mount the motherboard. Which one of the following **BEST** describes the primary purpose of motherboard standoffs?
- A. To allow air circulation behind the board and enhance overall cooling efficiency
  - B. To provide a firm mounting base for the CPU cooler and reduce possible vibration
  - C. To align the system case connectors with the motherboard headers for connection
  - D. To raise the motherboard above the case and prevent short circuits from contact (2 marks)
41. During CPU installation, John applies thermal paste and secures the cooling system. Which statement correctly describes the main function of the CPU's integrated heat spreader?
- A. It acts as a heat conductor, spreading heat from the CPU die to a larger surface area for efficient cooling.
  - B. It serves as a voltage regulator, ensuring stable power delivery to the processor components
  - C. It protects the fragile silicon die from physical damage and external mechanical stress
  - D. It functions as the main heat sink, dissipating thermal energy directly without additional cooling hardware (2 marks)
42. Upon opening a computer case with tangled cables, a technician wants to avoid confusion during disassembly. What is the **MOST** effective first step to prevent mistakes?
- A. Disconnect the cables from the motherboard and PSU to create slack for easier component handling
  - B. Take several clear reference photos of the existing cable layout before disconnecting any connections
  - C. Begin by removing smaller internal components like RAM modules and M.2 drives to create working space
  - D. Cut all zip ties immediately and untangle the cables to allow direct access to the installed components (2 marks)
43. A technician is preparing to disassemble a desktop computer for component replacement. Which one of the following represents the correct sequence of steps?
- A. Remove the RAM sticks, then the storage drives, then the CPU, with the motherboard as the final component removed
  - B. Remove the storage drives, then the graphics card, then the motherboard and finally the CPU cooler as the last item
  - C. Disconnect all power cables, remove expansion cards, then unscrew the power supply and finally remove the motherboard
  - D. Detach the motherboard from the case first, then remove the CPU and RAM and finally remove the storage drives (2 marks)
44. An IT student is installing a new solid-state drive (SSD) into a high-performance desktop. Which one of the following requirements is **MOST** critical to ensure proper functionality?
- A. The new SSD must be connected to a dedicated power cable from the power supply unit to operate correctly
  - B. The new SSD must be from the same brand as the existing one to allow a compatible RAID configuration
  - C. The motherboard chipset must be from the same manufacturer as the new SSD controller to ensure compatibility
  - D. The SSD must be installed in a PCIe 4.0 M.2 slot to fully utilize its available bandwidth capacity (2 marks)
45. A technology enthusiast is preparing to upgrade a motherboard in a desktop PC. Which preparatory step is **MOST** critical to prevent component damage during reassembly?
- A. Remove the CMOS battery and store it separately until the installation is complete
  - B. Verify form factor compatibility with the case and ensure correct PSU connections
  - C. Clean the CPU with isopropyl alcohol and install it before mounting the motherboard
  - D. Place the motherboard on a metal surface to ground static discharge before handling (2 marks)
46. A field engineer needs to replace a failed component in a user's computer on-site. Which one of the following is considered a field-replaceable unit (FRU)?
- A. A damaged soldered CPU package that requires reflow to restore normal operation
  - B. An integrated circuit on the motherboard that fails and requires chip-level soldering
  - C. A modular power supply unit that can be removed and replaced without difficulty
  - D. A system-on-chip controller embedded in the graphics card that needs reprogramming (2 marks)

47. While working inside a computer case, a technician wants to prevent electrostatic discharge that could damage sensitive components. Which one of the following practices **BEST** minimizes this risk?
- A. Wearing rubber-soled shoes and avoiding contact with grounded surfaces
  - B. Using an antistatic wrist strap connected to the computer chassis ground
  - C. Wearing cotton gloves to prevent fingerprints on electronic components
  - D. Spraying compressed air on each component before removing it from the case
- (2 marks)
48. During reassembly of a desktop computer, a technician is reconnecting power cables to the motherboard. Which safety precaution is **MOST** critical at this stage?
- A. Ensuring that the cables are arranged for maximum airflow inside the case
  - B. Confirming that each connector is firmly seated in the correct orientation
  - C. Attaching the CPU power cable before installing the RAM modules
  - D. Routing all cables through the same channel to reduce assembly time
- (2 marks)
49. A technician is cleaning an optical mouse that has tracking issues. Which one of the following cleaning methods is the safest and **MOST** effective for the sensor?
- A. Dabbing the sensor with a cotton swab lightly moistened with isopropyl alcohol
  - B. Blowing directly into the sensor opening to remove dust and moisture
  - C. Scraping the sensor surface with a plastic tool to clear away hardened dirt
  - D. Spraying compressed air into the sensor chamber while the mouse is powered on
- (2 marks)
50. A user reports smudges on their LED monitor and wants to clean it without damaging the screen. Which one of the following practices **BEST** preserves the display's condition?
- A. Applying glass cleaner directly onto the screen surface and wiping with tissue paper
  - B. Using a soft microfiber cloth slightly dampened with distilled water to wipe gently
  - C. Scrubbing the screen firmly with alcohol wipes until all smudges are removed
  - D. Spraying compressed air continuously onto the screen to eliminate static charges
- (2 marks)
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**DIPLOMA IN DATA MANAGEMENT AND ANALYTICS (DDMA)**

**DIPLOMA IN COMPUTER NETWORKS AND SYSTEMS ADMINISTRATION (DCNSA)**

**LEVEL I**

**INFORMATION SYSTEMS SUPPORT AND INTEGRATION**

**TUESDAY: 19 August 2025. Morning Paper.**

**Time Allowed: 2 hours.**

**This paper consists of fifty (50) Multiple Choice Questions. Answer ALL questions by indicating the letter (A, B, C or D) that represents the correct answer. Each question is allocated two (2) marks.**

1. The primary role of a transistor in advanced computer hardware design is \_\_\_\_\_.  
A. serving as non-volatile storage in memory systems  
B. regulating thermal conditions in microprocessors  
C. acting as a unit for signal amplification and binary switching  
D. facilitating peripheral communication via serial interfaces (2 marks)
2. A technician needs to boot into safe mode. What is the most common method on Windows 10?  
A. Pressing F2 during POST  
B. Holding Shift while clicking Restart  
C. Typing "msconfig" in the browser  
D. Unplugging the hard drive and rebooting (2 marks)
3. During preventive computer maintenance, which diagnostic tool is essential for validating continuity and voltage across hardware components?  
A. Digital multimeter  
B. Phillips-head screwdriver  
C. Cable tester  
D. Splicer (2 marks)
4. System integration is critical to modern enterprise information systems because it \_\_\_\_\_.  
A. enhances the graphical user interface for employee satisfaction  
B. encourages systems to operate in isolation across departments  
C. streamlines workflow and ensures data consistency  
D. disables common communication tools to reduce digital noise (2 marks)
5. A system is experiencing frequent application crashes and freezes under load. What is the most appropriate diagnostic tool to confirm RAM issues?  
A. Windows Memory Diagnostic  
B. Task Manager performance tab  
C. Disk Defragmenter utility  
D. SFC/scannow command in CMD (2 marks)



6. Standard Operating Procedures (SOPs) are critical in enterprise-level computer system maintenance because they \_\_\_\_\_.
- A. eliminate the need for error reporting during service
  - B. allow technicians to bypass regulatory compliance documentation
  - C. minimise the need for hardware diagnostics by relying on previous experience
  - D. enforce consistent, auditable and systematic maintenance practices
- (2 marks)
7. Data storage and backup systems are critical areas in information systems support and integration. The principal benefit of using RAID configurations is to \_\_\_\_\_.
- A. ensure sequential buffering in high-throughput cycles
  - B. enable logical partitioning across removable volumes
  - C. deliver fault tolerance through redundant data schemes
  - D. compress encrypted storage blocks for parallel execution
- (2 marks)
8. Before conducting internal maintenance on a computing system, the critical safety protocol that must be observed is \_\_\_\_\_.
- A. establishing a static ground connection before booting the OS
  - B. physically isolating the system from all power sources
  - C. initialising system services for hardware testing
  - D. connecting peripheral devices to test USB ports
- (2 marks)
9. A system takes too long to boot. Task Manager shows high startup impact programs. What is the best action to reduce boot time?
- A. Disable unnecessary startup applications
  - B. Increase page file size manually
  - C. Clear DNS resolver cache as a remedy
  - D. Change resolution in BIOS POST
- (2 marks)
10. A user support technician needs to restore a system to a known-good configuration after a failed patch. What is the most effective solution?
- A. Use 'sfc /scannow' in PowerShell
  - B. Load Safe Mode and uninstall the update
  - C. Restore from a previously captured system image
  - D. Create a virtual switch in Hyper-V
- (2 marks)
11. What is the strategic advantage of leveraging online technical support platforms in enterprise IT service management?
- A. Requires on-site attendance for diagnostics
  - B. Operates within constrained service windows
  - C. Independent access to expert knowledge and resources
  - D. Depends solely on paper-based documentation for tracking issues
- (2 marks)
12. Where should a technician look to analyse unexpected shutdowns and error codes in Windows?
- A. Event Viewer → System Logs
  - B. Task Manager → Startup tab
  - C. System Tray → Notifications
  - D. Control Panel → Power Options
- (2 marks)

13. Which one of the following components is an example of a non-auxiliary computer electronic component?  
A. Dongle  
B. Memory card  
C. Glove  
D. Mouse (2 marks)
14. Anti-static equipment is used in computer maintenance to \_\_\_\_\_.  
A. speed up repairs  
B. reduce noise and electricity consumption  
C. prevent electrostatic discharge  
D. keep hands clean (2 marks)
15. Which one of the following terms refers to the system that uses binary values to perform logical operations in a computer?  
A. Analog logic  
B. Computer digital logic  
C. Arithmetic reasoning  
D. Graphical interface (2 marks)
16. Tools like screwdrivers and antistatic wristbands are classified under \_\_\_\_\_.  
A. maintenance tools and equipment  
B. non-replicable components  
C. networking kit  
D. cladding (2 marks)
17. Which one of the following statements represents a robust and scalable backup strategy in enterprise systems?  
A. Emailing sensitive files to trusted administrators regularly  
B. Manually storing files on removable drives once a year  
C. Scheduling incremental backups to secure cloud servers  
D. Printing documents and archiving them for compliance (2 marks)
18. End-user education is important in cybersecurity because it \_\_\_\_\_.  
A. ensures users can fix their computers  
B. teaches users to recognise and avoid threats  
C. replaces the need for antivirus software  
D. helps users design websites (2 marks)
19. Delivering onboarding workshops for newly adopted enterprise software is part of what activity?  
A. Setting up access credentials for new users  
B. Enforcing compliance with data access policies  
C. Resetting system hardware configurations remotely  
D. Providing structured software training to employees (2 marks)
20. Which one of the following is a health and safety concern when working in ICT environments?  
A. Using dark screen themes without breaks  
B. Sitting for extended periods without breaks  
C. Cleaning the keyboard regularly  
D. Charging a mobile phone (2 marks)

21. Which one of the following controls is an example of a preventive control in cybersecurity?
- A. Using antivirus software and network firewalls routinely
  - B. Recovering lost data using forensic disk utilities
  - C. Restoring compromised systems from backup archives
  - D. Performing audits after an unauthorised breach occurs
- (2 marks)
22. Which one of the following tasks is related to choosing components that can work together in a computer system?
- A. Storage checking
  - B. File copying
  - C. Selection and compatibility issues
  - D. Software development
- (2 marks)
23. As a computer support technician, a customer says their files open with the wrong program. What is the most direct fix?
- A. Reinstall the operating system of your computer
  - B. Change default application via file properties
  - C. Clear the browser history from your computer
  - D. Enable disk cleanup in Control Panel
- (2 marks)
24. The core purpose of a firewall in enterprise security in network security and access control is to \_\_\_\_\_.
- A. perform real-time threat detection using hash chaining
  - B. replace outdated encryption in insecure sockets
  - C. automate endpoint patching using behavioral analytics
  - D. enforce traffic filtering through defined control policies
- (2 marks)
25. Which one of the following is the highest level of computer security?
- A. Physical security only
  - B. Administrative control
  - C. Multi-layered security
  - D. Password protection
- (2 marks)
26. Which one of the following statements refers to the documented best practices for operating and maintaining computers?
- A. Hardware and software tips
  - B. Standard operating and maintenance procedures
  - C. Warranty instructions and service level agreement
  - D. Installation logs
- (2 marks)
27. Which one of the following approaches is most widely recognised for reducing the impact of electronic waste in IT asset management?
- A. Recycling end-of-life computing equipment responsibly
  - B. Repurchasing updated equipment more frequently
  - C. Reloading operating systems on old hardware
  - D. Deleting unused files to free up space
- (2 marks)
28. The first step in the data recovery process is \_\_\_\_\_.
- A. formatting the hard drive to remove errors
  - B. identifying the cause and type of data loss
  - C. replacing the motherboard
  - D. changing the password
- (2 marks)

29. Which one of the following devices **BEST** describes the category of computers for smartphones and tablets?
- A. Personal computers
  - B. Legacy devices
  - C. Portable and mobile devices
  - D. Office hardware
- (2 marks)
30. When a computer frequently overheats and shuts down unexpectedly, which hardware solution is most effective?
- A. Cleaning dust from internal fans and improving ventilation
  - B. Expanding I/O ports by adding fans and external accessories
  - C. Dimming the screen to reduce power usage during operation
  - D. Running disk defragmentation and adjusting heat sink surfaces
- (2 marks)
31. Which one of the following protects software from threats and vulnerabilities?
- A. Screen saver
  - B. Application security
  - C. File compression
  - D. Disk cleanup
- (2 marks)
32. A technician wants to disable certain services during system startup. What tool is best suited for this in Windows?
- A. Services.msc
  - B. Regedit
  - C. Msconfig
  - D. Eventvwr
- (2 marks)
33. Ergonomics and screen time considerations are essential components of which computing-related domain?
- A. Enhancing user engagement in online entertainment systems
  - B. Designing data mining pipelines for real-time analytics
  - C. Promoting occupational safety in computing environments
  - D. Engineering mobile interfaces for software accessibility
- (2 marks)
34. Which one of the following is the primary goal of information security?
- A. Ensure integrity
  - B. Booting
  - C. Optimisation
  - D. Mirroring
- (2 marks)
35. Which one of the following statements accurately characterises the role of XML technologies in computing systems?
- A. Primarily used for transforming visual image formats in design software
  - B. Enables structured document formatting using user-defined tags
  - C. Offers proprietary data compression methods for network efficiency
  - D. Enhances sound encoding processes for audio transmission
- (2 marks)
36. In enterprise hardware maintenance, which task involves correcting a memory-related hardware issue?
- A. Installing a software-based memory cleaner
  - B. Reconfiguring BIOS settings for faster access
  - C. Compressing memory using system utilities
  - D. Replacing a defective memory module
- (2 marks)

37. Which one of the following is the first step in the system integration process?
- A. Buying new computers
  - B. System development and testing
  - C. Requirement analysis and planning
  - D. User training
- (2 marks)
38. The most effective way to improve system performance by reducing memory-related bottlenecks is to \_\_\_\_\_.
- A. decrease available disk storage capacity
  - B. increase RAM to optimise multitasking performance
  - C. remove legacy applications from the system
  - D. defragment drive to boost memory cache
- (2 marks)
39. Which one of the following is a device that produces hard copies from a computer?
- A. Monitor
  - B. Scanner
  - C. Projector
  - D. Printer
- (2 marks)
40. In enterprise hardware maintenance, which task involves correcting a memory-related hardware issue?
- A. Installing a software-based memory cleaner
  - B. Reconfiguring BIOS settings for faster access
  - C. Replacing a defective memory module with a new one
  - D. Compressing memory using system utilities
- (2 marks)
41. The primary objective of data protection within secure computing environments is to \_\_\_\_\_.
- A. implement strong encryption and access restrictions
  - B. preserve confidentiality, integrity, and availability
  - C. simplify user access to private information
  - D. ensure faster data transfer during operations
- (2 marks)
42. The activity of replacing a malfunctioning hard disk in a workstation is most accurately classified under which category?
- A. Diagnosing and resolving hardware-related operational failures
  - B. Executing automated system-level performance optimisation routines
  - C. Performing endpoint security and antivirus software deployment
  - D. Developing software modules for distributed mobile applications
- (2 marks)
43. A Windows system displays the error “INACCESSIBLE\_BOOT\_DEVICE” during boot. What is the most probable cause?
- A. Corrupted display driver in user mode
  - B. Hard drive set to Dynamic Disk
  - C. The default printer is set to offline mode
  - D. Incompatible storage controller driver
- (2 marks)
44. Frequent Blue Screen of Death (BSOD) errors are most associated with which issue?
- A. Network issues
  - B. Incompatible device drivers
  - C. Unplugged peripheral devices
  - D. Faulty monitor
- (2 marks)

45. A computer technician encounters a boot error indicating “Operating System Not Found.” What is the most probable cause for this?
- A. The desktop configuration file has become corrupted
  - B. An incorrect driver for the GPU is loaded in safe mode
  - C. The boot sector is misaligned with the system BIOS settings
  - D. The master file table is fragmented beyond threshold
- (2 marks)
46. In digital systems, how does a **NOT** gate contribute to Boolean logic implementation?
- A. It retains the input value to allow memory buffering
  - B. It plays a critical role in signal negation and control logic
  - C. It scales the signal voltage for analog-to-digital conversion
  - D. It allows multiple binary inputs to be multiplexed
- (2 marks)
47. A device whose driver is installed is not working and it shows a yellow exclamation mark in Device Manager. The likely cause for this is that \_\_\_\_\_.
- A. the driver is incompatible with OS
  - B. the user is not an administrator
  - C. BIOS virtualisation is enabled
  - D. cortana is interfering with hardware initialisation
- (2 marks)
48. A system emits three long beeps during POST. What does this typically indicate in most BIOS implementations?
- A. CPU fan speed below threshold
  - B. CMOS battery reaching voltage limit
  - C. GPU buffer overload during initialisation
  - D. Memory (RAM) failure or misconfiguration
- (2 marks)
49. A laboratory technician upgraded the CPU but the system would not POST. What is the most probable solution?
- A. Clear browser cache in UEFI settings
  - B. Reseat CPU and increase VRAM allocation
  - C. Update BIOS to support the new CPU model
  - D. Boot from USB using legacy BIOS mode
- (2 marks)
50. What does the command `chkdsk/r` do on a Windows system?
- A. Defragments the registry and cleans memory
  - B. Scans and repairs bad sectors
  - C. Refreshes Windows updates
  - D. Installs the recovery partition
- (2 marks)
- .....



**DIPLOMA IN DATA MANAGEMENT AND ANALYTICS (DDMA)**

**DIPLOMA IN COMPUTER NETWORKS AND SYSTEMS ADMINISTRATION (DCNSA)**

**LEVEL I**

**INFORMATION SYSTEMS SUPPORT AND INTEGRATION**

**WEDNESDAY: 23 April 2025. Morning Paper.**

**Time Allowed: 2 hours.**

**This paper consists of fifty (50) Multiple Choice Questions. Answer ALL questions by indicating the letter (A, B, C or D) that represents the correct answer. Each question is allocated two (2) marks.**

1. Which one of the following statements about PCI slots is **NOT** true?
  - A. PCI and PCIe cards are compatible with each other
  - B. PCIe slots come in different sizes such as x4 and x8
  - C. PCIe slots are used for graphic cards and SSDs
  - D. PCIe slots are used for high-speed data transfer(2 marks)
  
2. The time taken for a required hard disk sector to appear under the read/write heads is known as \_\_\_\_\_.
  - A. pause
  - B. latency
  - C. wait time
  - D. response(2 marks)
  
3. The following are benefits of universal serial bus, **EXCEPT** \_\_\_\_\_.
  - A. provides unlimited data storage capacity
  - B. easy to use with plug-and-play capabilities
  - C. able to connect multiple devices through hubs
  - D. high data transfer rates for a variety of devices(2 marks)
  
4. A single beep at the end of the Power On Self-Test (POST) indicates \_\_\_\_\_.
  - A. a corrupt video BIOS/UEFI
  - B. a potential hard disk drive failure
  - C. a successful Power On Self-Test
  - D. a problem with the memory slots(2 marks)
  
5. Which one of the following computing solutions is commonly used to facilitate communication between different enterprise applications in system integration?
  - A. Content management system
  - B. Enterprise resource planning
  - C. Workflow automation platform
  - D. Enterprise service bus(2 marks)

6. Oliver's monitor suddenly stopped displaying any image. He has confirmed that the monitor is powered on, but there is still no display. Which one of the following steps should he take next to troubleshoot the issue?
- A. Check if the monitor's brightness is set to the lowest level
  - B. Check the cable connectors from the computer to the monitor
  - C. Restart the monitor, allowing it to re-establish the connection
  - D. Replace the monitor with a new one to see if the issue is resolved
- (2 marks)
7. Which one of the following devices/ports does not require a heat sink?
- A. CPU
  - B. SSD
  - C. GPU
  - D. USB
- (2 marks)
8. Which one of the following statements is an advantage of liquid versus air CPU coolers?
- A. Less noisy due to large radiators
  - B. Reliable and simple to set up
  - C. Minimal maintenance required
  - D. Generally cheaper than air coolers
- (2 marks)
9. A user calls the help desk and reports that her printed documents are consistently coming out misaligned, with text and images not properly centered on the page. Which one of the following is the most likely cause of this problem?
- A. Paper feed error, leading to misaligned text and images
  - B. The paper is misaligned in the tray, leading to paper skew
  - C. The printer was offline leading to low quality print jobs
  - D. A new printer cartridge that has not been properly installed
- (2 marks)
10. Which one of the following activities should be done after replacing the motherboard?
- A. Unplug external monitors
  - B. Reformat the hard disk drive
  - C. Configure BIOS/UEFI settings
  - D. Reinstall the operating system
- (2 marks)
11. After powering up his computer, a user called ICT support and reported the following error message on the screen:  
**CMOS Checksum Error – Defaults loaded**
- Which one of the following is a possible cause of this error?
- A. Excessive heat on motherboard
  - B. Switching of monitor displays
  - C. Changing the boot sequence
  - D. Weak or dead CMOS battery
- (2 marks)
12. A user is looking to build a new desktop computer and wants to choose a motherboard that offers excellent compatibility with a wide range of components, and ample expansion slots. Which one of the following types of motherboard should the user select?
- A. ATX
  - B. BTX
  - C. Micro ATX
  - D. Mini ITX
- (2 marks)



13. A customer calls online support to enquire about purchasing a high-quality display with a wide viewing angle for gaming purposes. Which one of the following displays would be advisable?  
A. Twisted nematic  
B. In-plane switching  
C. Light-emitting diode  
D. Vertical alignment (2 marks)
14. Which one of the following data has less risk in terms of unauthorised access?  
A. Internal data  
B. Restricted data  
C. External data  
D. Confidential data (2 marks)
15. Which one of the following is a standard maintenance procedure that involves taking actions when a piece of computer equipment is malfunctioning or is broken?  
A. Perfective maintenance  
B. Preventive maintenance  
C. Adaptive maintenance  
D. Corrective maintenance (2 marks)
16. The following are functions of computer diagnostic software, **EXCEPT** \_\_\_\_\_.  
A. installing programs  
B. detecting problems  
C. optimising performance  
D. troubleshooting errors (2 marks)
17. Which one of the following electrical quantities cannot be measured by a digital multimeter?  
A. Voltage  
B. Power  
C. Current  
D. Resistance (2 marks)
18. Which one of the following ports can be used to connect a laptop to a router?  
A. Mini B  
B. Firewire  
C. Ethernet  
D. Thunderbolt (2 marks)
19. Which one of the following statements is a primary objective of performing a diagnostic boot?  
A. To run system tests with minimal interference  
B. To permanently enhance system performance  
C. To analyse and delete unwanted data files  
D. To optimise computer graphical capabilities (2 marks)

20. Amani has just bought a new computer and calls customer support, expressing frustration that his machine is performing slowly during gaming sessions. He specifically mentioned that he wanted a CPU optimised for gaming performance. Which one of the following processors would most likely address his concern?
- A. AMD Ryzen
  - B. Intel Core i3
  - C. Intel Pentium
  - D. AMD Athlon
- (2 marks)
21. Which one of the following statements **BEST** describes a standard operating procedure?
- A. Recommended practices and explicit advice for performing tasks while offering direction
  - B. Comprehensive documents that include policies that serve as a reference for employees
  - C. Detailed, written instructions to achieve uniformity of the performance of a specific function
  - D. A list of tasks to be checked or followed to ensure that all the necessary steps are completed
- (2 marks)
22. Which one of the following processes is useful for integrating data from disparate sources without duplicating the data?
- A. Data replication
  - B. Data federation
  - C. Data warehousing
  - D. Data virtualisation
- (2 marks)
23. Which one of the following statements **BEST** describes the difference between serial and parallel ports?
- A. Serial ports transmit data one bit at a time, while parallel ports transmit multiple bits simultaneously
  - B. Serial ports transmit multiple bits simultaneously, while parallel ports transmit data one bit at a time
  - C. Serial ports are used for connecting printers while parallel ports are used for connecting keyboards
  - D. Serial ports can transmit data over shorter distances while parallel ports are used for longer distances
- (2 marks)
24. Which one of the following is **NOT** an application of compressed air?
- A. To power airbrushes and spray guns
  - B. To blow dust, dirt and debris from computers
  - C. Used to cool and ventilate sensitive machinery
  - D. Used to cool the computer microprocessor
- (2 marks)
25. Which one of the following is **NOT** a data safety precaution?
- A. Backing up important files regularly to an external drive
  - B. Keep at least three copies of your data on different devices
  - C. Ensure backup media are decrypted and protected by strong passwords
  - D. Setting proper access controls and permissions on files and folders
- (2 marks)
26. Which one of the following shortcut keys can help a user to quickly switch between applications and improve multitasking efficiency?
- A. FN + TAB
  - B. ALT + TAB
  - C. CTRL + TAB
  - D. SHIFT + TAB
- (2 marks)

27. Which one of the following is a software issue that may result into frozen screens?  
A. Running too many programs or processes at once  
B. Outdated utility software  
C. Insufficient memory  
D. Excessive background processes (2 marks)
28. The environmental consideration for managing e-waste that involves not throwing electronics devices in the trash is referred to as \_\_\_\_\_.  
A. avoiding pollution  
B. recycling  
C. avoiding landfills  
D. global impact (2 marks)
29. Which one of the following is **NOT** an example of cloud storage?  
A. Google drive  
B. OneDrive  
C. Dropbox  
D. Disk quota (2 marks)
30. Which one of the following is a type of computer virus that infects the partition table of a hard disk?  
A. Macro  
B. Resident  
C. Boot sector  
D. Trojan horse (2 marks)
31. Which one of the following options promotes reusability and interoperability of software components across different platforms?  
A. Service oriented architecture  
B. Enterprise application integration  
C. Enterprise information integration  
D. Enterprise oriented architecture (2 marks)
32. A user enquires with a colleague about the different interfaces that can be used to connect a projector to a laptop. Which one of the following is **NOT** suitable for this connection?  
A. VGA  
B. HDMI  
C. USB-C  
D. Ethernet (2 marks)
33. The least secure wireless encryption standard is \_\_\_\_\_.  
A. WPA  
B. WEP  
C. WPA2  
D. WPA3 (2 marks)

34. Which one of the following is an application security measure that involves reviewing and testing the software's source code for vulnerabilities that could be exploited by attackers?
- A. Code audits
  - B. Patch management
  - C. Authentication and authorisation
  - D. Secure coding practices
- (2 marks)
35. The data security activity of replacing sensitive data with fictitious or scrambled data while retaining its format for development purposes is referred to as \_\_\_\_\_.
- A. data tokenisation
  - B. data patching
  - C. data masking
  - D. data fragmentation
- (2 marks)
36. The following are benefits of using online support materials instead of user guides, **EXCEPT** \_\_\_\_\_.
- A. online support materials are available 24/7
  - B. users do not need to store or carry around physical user manuals
  - C. users can use a search function to quickly find specific solutions
  - D. online support materials are not cost effective
- (2 marks)
37. Which one of the following is a type of authentication that uses physical characteristics, such as fingerprints or retina scans to authenticate users?
- A. Biometric Authentication
  - B. Two-Factor Authentication
  - C. Passwords
  - D. Multi-Factor Authentication
- (2 marks)
38. \_\_\_\_\_ is the process of converting data from its original, readable form into an unreadable format using an algorithm and a key.
- A. Data authorisation
  - B. Data decryption
  - C. Data encryption
  - D. Data masking
- (2 marks)
39. Which one of the following involves connecting specific subsystems or departments within an organisation, often through customised solutions?
- A. Point-to-Point Integration
  - B. Vertical integration
  - C. Star integration
  - D. Horizontal integration
- (2 marks)
40. Which one of the following is the second step in system integration by partial fraction?
- A. Factor the denominator
  - B. Check if the degree of the numerator is less than the degree of the denominator
  - C. Set up the partial fraction decomposition
  - D. Solve for the constants
- (2 marks)

41. A type of computer backup that involves only backing up copies of the data that has changed since the last backup is \_\_\_\_\_.
- A. full backup
  - B. differential backup
  - C. incremental backup
  - D. mirror backup
- (2 marks)
42. Which one of the following is **NOT** an example of restricted data?
- A. Personal Identifiable Information
  - B. Trade Secrets
  - C. Classified Government Data
  - D. Corporate data
- (2 marks)
43. Which one of the following is **NOT** a remedy to solve software problems that can affect hardware performance?
- A. Run diagnostics to ensure the operating system and drivers are up to date
  - B. Check for malware
  - C. Turn off the computer and reseal the RAM sticks in their slots.
  - D. Clean up unnecessary files
- (2 marks)
44. \_\_\_\_\_ is a computer program that is designed to replicate itself by copying itself into the other programs stored in a computer.
- A. Computer file
  - B. Computer virus
  - C. Computer worm
  - D. Computer software
- (2 marks)
45. Which one of the following is a type of network attack in which a system is monitored and sometimes scanned for open ports and vulnerabilities?
- A. Passive attack
  - B. Active attack
  - C. Modification attack
  - D. DoS attack
- (2 marks)
46. Which one of the following is the network troubleshooting tool that is designed for displaying the time it takes for a packet of information to travel between a local computer and a destination IP address or domain?
- A. Ipconfig
  - B. Tracert
  - C. Netstat
  - D. Ping
- (2 marks)
47. A user has an LCD and a CRT monitor attached to the workstation. The colours are slightly off on the CRT but not the LCD. Which one of the following controls should be used in troubleshooting?
- A. Degauss
  - B. Geometry
  - C. Contrast
  - D. Brightness

48. A user recently purchased a video card for gaming purposes. The user installed the appropriate drivers and validated they work using vendor-supplied test tools. However, while gaming, the speed of the case fans increases, the entire system locks up and the user must hard boot to restart the computer. Which of the following is the **MOST** likely cause of this issue?
- A. Unsupported operating system
  - B. Unacceptable CPU type and speed
  - C. Inadequate video RAM amount
  - D. Insufficient airflow and cooling
- (2 marks)
49. Ann complains that her laptop is overheating. She checked and said that all the internal cooling systems were working properly. What do you think could help her with the situation?
- A. Install a liquid cooling system
  - B. Buy a cooling pad for laptops
  - C. Buy a new laptop
  - D. Do not leave her laptop on for extended periods
- (2 marks)
50. If the mouse pointer is moving intermittently on the screen but has not failed altogether, which of the following troubleshooting steps should you take?
- A. Check its connection to the port
  - B. Clean the mouse
  - C. Reinstall the drivers
  - D. Check for a conflict with the modem
- (2 marks)
- .....

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**DIPLOMA IN DATA MANAGEMENT AND ANALYTICS (DDMA)**

**DIPLOMA IN COMPUTER NETWORKS AND SYSTEMS ADMINISTRATION (DCNSA)**

**LEVEL I**

**INFORMATION SYSTEMS SUPPORT AND INTEGRATION**

**TUESDAY: 3 December 2024. Morning Paper.**

**Time Allowed: 2 hours.**

**This paper consists of fifty (50) Multiple Choice Questions. Answer ALL questions by indicating the letter (A, B, C or D) that represents the correct answer. Each question is allocated two (2) marks.**

1. In a bid to protect computer settings, a student setup a BIOS administrator password. Which one of the following methods can reset the forgotten password?  
A. Remove the CMOS battery  
B. Use a multimeter  
C. Press Ctrl+Alt+Del  
D. Add jumpers to reset (2 marks)
2. Which one of the following methods is a valid type of data encryption algorithm?  
A. Authentication encryption  
B. Synchronous encryption  
C. Symmetric encryption  
D. Quantum encryption (2 marks)
3. The data masking that hides sensitive data in memory, eliminating the requirement to store altered data in the database is referred to as \_\_\_\_\_.  
A. deterministic data masking  
B. on-the-fly data masking  
C. dynamic data masking  
D. static data masking (2 marks)
4. Which one of the following types of system integration involves the connectivity of each system with the other remaining subsystems?  
A. Star integration  
B. Vertical integration  
C. Horizontal integration  
D. Industrial life-cycle integration (2 marks)
5. Which one of the following statements is **NOT** a challenge of computer systems integration in an organisation?  
A. Existence of legacy systems in organisations  
B. Rapid changes in the integration technology  
C. Lack of skills among the workers  
D. Multi-skilled technology savvy users (2 marks)

6. Which one of the following data backup processes can be undertaken while a system continues to be in operation?
- A. Hot backup
  - B. Cold backup
  - C. Differential backup
  - D. Mirror backup
- (2 marks)
7. You power your computer on and receive a “Bad or missing operating system” message. What is **MOST** likely the cause of this message?
- A. Your memory is corrupt
  - B. You have an incompatible slave drive configuration
  - C. You have a missing or corrupt boot sector
  - D. Your SCSI controller card has a priority of 15
- (2 marks)
8. The ability of an operating system to control and delegate the processor’s time to different tasks is called \_\_\_\_\_.
- A. preemptive multitasking
  - B. time slice
  - C. cooperative multitasking
  - D. multiprocessing collaboration
- (2 marks)
9. Which one of the following terms **BEST** describes the first point of contact for computer end users experiencing technical problems whose functions include issue tracking, ticket management, troubleshooting, and user support?
- A. IT service management
  - B. IT technician desk
  - C. IT help desk
  - D. IT troubleshooting management
- (2 marks)
10. Which one of the following data handled by an organisation may be classified as **MOST** confidential, regulated and high-risk data?
- A. Personal Identifiable Information
  - B. Inter-office emails or memos
  - C. Organisation social media page
  - D. Proprietary intellectual property
- (2 marks)
11. Which one of the following devices dictates the computer form factor to use?
- A. Peripherals
  - B. Processor
  - C. Motherboard
  - D. Hard disk
- (2 marks)
12. Which one of the following terms refers to height to width ratio of a computer monitor screen?
- A. Aspect ratio
  - B. Diagonal ratio
  - C. Width ratio
  - D. Length ratio
- (2 marks)



13. Which one of the following devices is used for video games, flight simulators and for controlling industrial robots?  
A. Mouse  
B. Light pen  
C. Joystick  
D. Microphone (2 marks)
14. A computer hard disk platter is divided into tracks, which are further subdivided into \_\_\_\_\_.  
A. clusters  
B. sectors  
C. heads  
D. vectors (2 marks)
15. Which one of the following cleaning liquids is used to clean smudged keys on a keyboard?  
A. TMC solvent  
B. Silicone spray  
C. Denatured alcohol  
D. All-purpose cleaner (2 marks)
16. Which one of the following components would be affected most by electrostatic discharge?  
A. Expansion board  
B. Monitor  
C. Keyboard  
D. Power supply (2 marks)
17. A computer did not produce a single beep on booting. What should be checked first?  
A. Power supply  
B. Memory  
C. Motherboard  
D. Speaker (2 marks)
18. Which one of the following tools is used to test serial and parallel ports?  
A. Volt probe  
B. Cable scanner  
C. Wrap plugs  
D. Sniffer (2 marks)
19. Which one of the following statements describes the logical first step in troubleshooting a computer?  
A. Check the computer CMOS  
B. Define the circumstances of the problem  
C. Call the vendor  
D. Define what applications used (2 marks)
20. Which one of the following issues may **NOT** cause slow computer internet connection?  
A. Inefficient router  
B. ISP bandwidth throttling  
C. Spyware and virus  
D. Unregistered computing device (2 marks)

21. Which one of the following tools is used for working with patch panels?
- A. Network testers
  - B. Firewall tool
  - C. Loopback plug
  - D. Punch down tool
- (2 marks)
22. Which of the following measures is an example of an administrative cybersecurity control measure?
- A. Backup and recovery practices
  - B. Intrusion detection systems
  - C. Multi-factor authentication
  - D. Security awareness training
- (2 marks)
23. Which one of the following statements is true regarding RJ45 and GG45 connectors?
- A. GG45 connectors are not backward compatible with RJ45 connectors
  - B. GG45 is the standard and ubiquitous connector for Ethernet networking
  - C. GG45 connectors have 12 contacts while RJ45 connectors have 8 contacts
  - D. GG45 is commonly used for Cat 5 cabling with RJ45 is used for Cat 8 cabling
- (2 marks)
24. The Human Resources (HR) department wants to ensure that all employees are aware of and adhere to the company's data privacy policies. To achieve this, they develop a comprehensive standard operating procedure outlining the proper handling of sensitive information. How does the HR department's action contribute to the workplace?
- A. It contributes to employee onboarding process therefore impacting turnover
  - B. It ensures adherence and compliance with company policies and procedures
  - C. It promotes social events within the company, fostering a sense of teamwork
  - D. It improves employee well-being and reduces the number of working hours
- (2 marks)
25. A student was given the steps to follow when troubleshooting a computer that wouldn't turn on:
- I. Inspect the power cord for damage
  - II. Check the power supply unit
  - III. Ensure the power cord is securely connected
  - IV. Bypass power strips or surge protectors
- Required:**  
Arrange the steps in the correct order to follow.
- A. II, III, IV, I
  - B. I, II, III, IV
  - C. III, I, II, IV
  - D. III, I, IV, II
- (2 marks)
26. Running a processor or motherboard at a higher frequency than the manufacturer recommends is referred to as \_\_\_\_\_.
- A. hyper threading
  - B. multithreading
  - C. augmentation
  - D. overclocking
- (2 marks)

27. Which of the following is **NOT** a symptom of a faulty power supply unit?

- A. Electric shocks
- B. System hanging
- C. Slow performance
- D. Random shutdowns

(2 marks)

28. A student came across the following diagram:



Which one of the following ports replaced the port above?

- A. RJ45
- B. RCA
- C. HDMI
- D. USB-B

(2 marks)

29. During an ICT preventive maintenance class, a student came across the following cable:



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Name the device connected to this cable.

- A. Expansion card
- B. Heat sink
- C. Hard disk
- D. Keyboard

(2 marks)

30. Which one of the following refers to a standard or point of reference used to evaluate or compare the performance of computer hardware or software?

- A. Touchstone
- B. Benchmark
- C. Criterion
- D. Capstone

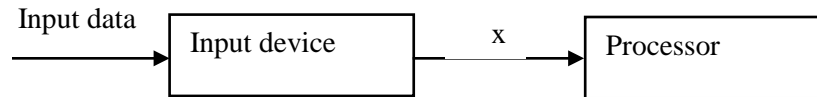
(2 marks)

31. A measure of the number of hours that a computer system is unavailable for use is referred to as \_\_\_\_\_.  
A. downtime  
B. transient  
C. interrupt  
D. shutdown (2 marks)
32. Which one of the following symptoms is **NOT** related to dirty power?  
A. Flickering lights  
B. Equipment noise  
C. Sudden blackout  
D. Transformer issues (2 marks)
33. Which one of the following technologies is **NOT** associated with end-user computing?  
A. Mainframe computers  
B. Wearable technology  
C. Remote desktop software  
D. Application virtualisation (2 marks)
34. Which one of the following statements **BEST** describes the primary challenge in integrating heterogeneous systems?  
A. Achieving a standardised user interface  
B. Maintaining data consistency and integrity  
C. Reducing the cost of hardware and software  
D. Simplifying user training and documentation (2 marks)
35. Which one of the following statements about the CMOS battery and its role in a computer system is **CORRECT**?  
A. The CMOS battery supplies power to the system's main processor to preserve BIOS settings  
B. The CMOS battery provides power to the real-time clock when the computer is powered off  
C. The CMOS battery is responsible for powering the computer's RAM to retain data during shutdown  
D. The CMOS battery supplies power to the hard drive to maintain data integrity during power loss (2 marks)
36. After switching on his computer, Alfred Gitau came across the following error "Non-system disk error or disks error, replace and strike any key when ready". Which of the following options can fix this error?  
A. Adjusting monitor for image viewing  
B. Installing updated graphics software  
C. Set the correct boot priority in BIOS  
D. Checking status of network connection (2 marks)
37. Imani Aisha recently upgraded her computer to the latest operating system. After restarting the computer, she realised that one of the applications was no longer working. Which one of the following is the next step for her to take?  
A. Reinstall the application  
B. Check for clogged vents  
C. Reinstall the operating system  
D. Check for application updates (2 marks)

38. An employee of an organisation receives a call from someone claiming to be part of the support staff from the IT department and urgently needing to verify the employee's login credentials due to a supposed security breach. The employee, believing the call to be legitimate, provides their username and password, which the attacker then uses to access sensitive company data. This case is an example of \_\_\_\_\_.
- A. social engineering
  - B. reverse engineering
  - C. link manipulation
  - D. evil twin phishing
- (2 marks)
39. Which one of the following terms refers to the process of bringing together the component sub-systems into one system and ensuring that the subsystems function together as a system?
- A. System encapsulation
  - B. System assembly
  - C. System polymorphism
  - D. System integration
- (2 marks)
40. Which one of the following types of computer motherboards support a single or a twin CPU configuration and has up to eight RAM slots?
- A. Micro ATX motherboard
  - B. Flex ATX motherboard
  - C. eXtended ATX motherboard
  - D. Standard ATX motherboard
- (2 marks)
41. Which one of the following devices can be used to protect electronic equipment from transient voltage or spikes?
- A. Multimeter
  - B. Surge suppressor
  - C. Power supply unit
  - D. An AC compressor
- (2 marks)
42. Which one of the following features is added to newer processors to provide faster access to memory, and to provide better overall application and system support?
- A. ESD protection
  - B. Visual language model
  - C. L6 cache
  - D. L3 cache
- (2 marks)
43. While using compressed air can to clean computer parts, why is it advisable to avoid shaking it too vigorously?
- A. Propane and butane gas can expand and explode the can
  - B. Propane and butane gas can catch fire due to excessive shaking
  - C. Propane and butane gas can liquefy and expel liquid
  - D. Shaking can cause harmful chemical reaction among the can contents
- (2 marks)
44. Which one of the following practices is **NOT** necessary in preventing physical health problems when using computers?
- A. Ensure monitor is at eye level
  - B. Keep feet up on a raised ground
  - C. Keep wrists in a neutral position when typing
  - D. Use a chair with good back support
- (2 marks)

45. Software developers use software development tools to debug, maintain, create and support applications. Which one of the following **CANNOT** be classified as a software development tool?
- A. Compilers
  - B. Linkers
  - C. Memory editors
  - D. Performance analysis tools
- (2 marks)

46. Select the answer that **BEST** fills in the gap marked X on the figure below.



- A. Control unit signal
  - B. Output device signal
  - C. Data in coded form
  - D. Beeping sound
- (2 marks)
47. Tom is considering upgrading a desktop processor. What else must he also consider for this upgrade?
- A. Network loadable module
  - B. A permanent swap file
  - C. Media player software
  - D. Voltage regulator module
- (2 marks)
48. Suggest the **MOST** appropriate reason for upgrading a computer's storage drive to a solid-state drive (SSD).
- A. To increase the size of the memory
  - B. To avoid CPU overclocking leading to crashing
  - C. To improve data access speed and overall system performance
  - D. To add more USB ports and peripheral devices
- (2 marks)
49. The 4R rule is a garbage and waste stream management strategy that is environmentally sustainable. Which one of the following is **NOT** an incremental fraction of the waste stream?
- A. Reproduce
  - B. Reuse
  - C. Recycling
  - D. Recovery
- (2 marks)
50. Which one of the following is **NOT** a benefit of upgrading computer software?
- A. Upgrading ensures better overall PC performance
  - B. Upgrading facilitates good partnerships of software houses
  - C. Upgrading guarantees compatibility
  - D. Upgrading ensures access to the most up-to-date features
- (2 marks)
- .....



**DIPLOMA IN DATA MANAGEMENT AND ANALYTICS (DDMA)**

**DIPLOMA IN COMPUTER NETWORKS AND SYSTEMS ADMINISTRATION (DCNSA)**

**LEVEL I**

**INFORMATION SYSTEMS SUPPORT AND INTEGRATION**

**TUESDAY: 20 August 2024. Morning Paper.**

**Time Allowed: 2 hours.**

**This paper consists of fifty (50) Multiple Choice Questions. Answer ALL questions by indicating the letter (A, B, C or D) that represents the correct answer. Each question is allocated two (2) marks.**

1. Which one of the following reasons may force a computer user to replace a computer motherboard?
  - A. In order to increase the capacity of power supply unit to motherboard
  - B. In order to change the form factor of the motherboard
  - C. In order to upgrade the processor
  - D. In order to enhance audio output supported by motherboard(2 marks)
2. Which one of the following is **NOT** an active electronic component in a computer?
  - A. Diode
  - B. Transistor
  - C. Resistor
  - D. Integrated Circuit(2 marks)
3. Which one of the following memories require refreshing to store information?
  - A. DRAM
  - B. SRAM
  - C. EPROM
  - D. Cache(2 marks)
4. Which one of the following is ideal for cleaning printed circuit boards such as computer motherboard?
  - A. Isopropyl alcohol
  - B. Distilled water
  - C. Soap and water
  - D. Piece of clothe(2 marks)
5. A user would like to leave their computer on for an hour when attending a meeting. Which one of the following power options would be **BEST** for this duration?
  - A. Hibernate
  - B. Sleep mode
  - C. Shut down
  - D. Switch user(2 marks)
6. A computer user found the following error: "BOOTMGR is missing". Which one of the following is **NOT** a possible cause for this error?
  - A. Perform a BIOS upgrade
  - B. Remove external media
  - C. Install scripting tools
  - D. Check hard drive for errors(2 marks)
7. The process of hiding data by modifying its original letters and numbers is known as \_\_\_\_\_.
  - A. data encryption
  - B. data masking

- C. data authentication  
D. data authorisation (2 marks)
8. Which one of the following is **NOT** a common cause of screw stripping during computer assembly?  
A. The screwdriver slipping out and scratching the screw  
B. Using the wrong screwdriver for the given screw head  
C. Improper screwdriver etiquette, such as screwing too fast or at an angle to the head  
D. Using poor quality screws (2 marks)
9. The name of a device with some processing capability through which information may be transferred to and from a larger processing system is known as \_\_\_\_\_.  
A. digital terminal  
B. programmable terminal  
C. intermediary terminal  
D. logical terminal (2 marks)
10. Which one of the following options can be used to move the specified file to the recycle bin?  
A. Right click on the specified file and select delete  
B. Use del command from a command prompt  
C. Use RMDIR command from a command prompt  
D. Select the specified file, then SHIFT + DELETE (2 marks)
11. Which one of the following is a type of system integration method that involves integrating one system directly with another system?  
A. Vertical integration  
B. Point-to-point integration  
C. Horizontal integration  
D. Star integration (2 marks)
12. Which one of the following is **NOT** a symptom of repetitive strain injury associated with overuse of computer?  
A. Tightness, discomfort, stiffness in the hands, wrists and fingers  
B. Tingling or numbness in the hands  
C. Loss of mental coordination and dizziness  
D. Constant pain in the upper back, shoulders or neck (2 marks)
13. Which method of e-waste management entails sorting and separation of waste types to facilitate recycling and correct onward disposal?  
A. Waste burying  
B. Waste cohering  
C. Waste segregation  
D. Waste trashing (2 marks)
14. Suggest the name of training employees characterised by delivering content to them in bite-sized (3-5 minutes) bursts at the point of need, with a focused and specific learning outcome.  
A. Micro learning  
B. Gamification training  
C. Peer-to-peer learning  
D. Webinar (2 marks)
15. When trying to access a website, Joel received the following message: “Error 400 Bad request”. Which one of the following is a possible cause of the error?  
A. Third party software intercepting the request  
B. A mistake was made when developing the website  
C. The request sent to the server is incorrect  
D. The website has a malicious code injected into it (2 marks)
16. Which one of the following is **NOT** a business driver for an information system?  
A. Business process redesign  
B. Knowledge asset management  
C. Proliferation of networks and the Internet  
D. Security and privacy (2 marks)



17. Which one of the following is **NOT** a credential that can be used to identify and authenticate a user?
- A. Password
  - B. Security token
  - C. Biometric scan
  - D. Frisking
- (2 marks)
18. A user receives a “timeout” error when sending emails. Which one of the following would be a possible cause?
- A. The email address is blacklisted by the ISP
  - B. A problem with the email server or account
  - C. A problem with the email service provider
  - D. The file or attachment may be too large
- (2 marks)
19. Which one of the following is **NOT** a cause of aches and pains when using a computer?
- A. Repetitive work
  - B. Uncomfortable working postures
  - C. Using a laptop instead of a desktop computer
  - D. Carrying out tasks for long periods without suitable rest breaks
- (2 marks)
20. Which one of the following is **NOT** an example of a communication device?
- A. Gaming console
  - B. Joystick
  - C. Smartphone
  - D. Smart TV
- (2 marks)
21. Which one of the following tools assist in troubleshooting by providing systematic instructions to identify and resolve common computer issues?
- A. User manual
  - B. Wizard
  - C. Tutorial
  - D. Regular form
- (2 marks)
22. Screen sharing is a popular method of offering computer support. Which one of the following applications **CANNOT** offer screen sharing for remote support?
- A. Zoom
  - B. TeamViewer
  - C. ShareDesk
  - D. Google Remote Desktop
- (2 marks)
23. Which one of the following is **NOT** a common cause of electric shock?
- A. Using a frayed or damaged AC adapter
  - B. Moving a laptop while it's still on
  - C. Touching overloaded electrical outlets
  - D. Putting objects into an electrical outlet
- (2 marks)
24. Which one of the following options can be used to resolve a non-system disk error?
- A. Disconnect all external storage devices such as USB drives and attempt again
  - B. Close additional programs loading on startup and install additional memory
  - C. Remove the memory module from its current slot and place it in a different slot
  - D. Reformat the hard drive to remove existing data and then reinstall the operating system
- (2 marks)
25. Which one of the following is a method of computer support where customer service is delivered digitally through multiple channels?
- A. Peer support
  - B. Help desk support
  - C. People support
  - D. Online support
- (2 marks)
26. What is the name of software, which combines different applications and services into a cohesive and robust application?
- A. Integration platform
  - B. Programming
  - C. Platform merger
  - D. Suite mixer
- (2 marks)

27. Which one of the following information system security goals will ensure that information is **NOT** altered without authorisation?
- A. Confidentiality
  - B. Integrity
  - C. Non-repudiation
  - D. Availability
- (2 marks)
28. You work as part of the IT support team in an educational institution, and have recently installed a wireless printer in the office. A user calls in to report that he is unable to print from the wireless printer. What could the cause of this be?
- A. The printer uses the oldest USB standard which is not suitable for some connections
  - B. The printer is connected to a different network SSID than the user's device
  - C. The printer is using an Ethernet cable instead of the previously installed fiber optic cable
  - D. The printer is restricted to desktop computer users only, and the user cannot print from his tablet device
- (2 marks)
29. Data classification is the act of assigning an information category based on the content's level of sensitivity. Which one of the following is **NOT** a data classification category?
- A. Public data
  - B. Obscured data
  - C. Restricted data
  - D. Confidential data
- (2 marks)
30. Which one of the following is **NOT** a key consideration when upgrading computer hardware?
- A. Compatibility issues
  - B. Assessing the cost-benefit balance
  - C. Upgrading time
  - D. Software issues
- (2 marks)
31. Which one of the following is the type of authentication that requires the user to verify their identity via an app on a smartphone or tablet?
- A. Email token authentication
  - B. Software token authentication
  - C. SMS token authentication
  - D. User token authentication
- (2 marks)
32. Which one of the following is indicated by the orange light on a laptop?
- A. Caps lock on
  - B. Wireless connectivity
  - C. Bluetooth activity
  - D. Battery charging
- (2 marks)
33. Which one of the following is a type of hidden computer virus that operates by attacking operating system processes while actively avoiding detection?
- A. Trojan horse
  - B. Resident virus
  - C. Cavity virus
  - D. Stealth virus
- (2 marks)
34. Which one of the following cables is used to connect a laptop to a television?
- A. Coaxial
  - B. PS/2
  - C. HDMI
  - D. Ethernet
- (2 marks)
35. Which one of the following statements **BEST** describe virtual memory?
- A. A high speed storage area that stores frequently accessed data or instructions
  - B. It provides extra storage by transferring data between main memory and the hard disk
  - C. A volatile memory that allows the computer to store and quickly access data while it's running
  - D. It is designed for sub-compact computers and allows for high density storage
- (2 marks)

36. Which one of the following is **NOT** a factor to consider when upgrading the power supply unit?
- A. Wattage rating
  - B. Efficiency rating
  - C. Connectivity options
  - D. Durability options
- (2 marks)
37. Which one of the following methods can be used to reduce the risks of visual problems when using a computer?
- A. Stand up and march on the spot for 30 seconds to improve the blood flow in your eyes
  - B. Stand on your tiptoes and stretch upwards, as tall as you can, to release some of the tension in your head and eyes
  - C. Keep the working area clean and use an addition lamp to make it easier to see
  - D. Reposition the screen to avoid glare from lights or windows
- (2 marks)
38. Suggest the name of an optical film that allows the display to show its image by controlling the amount of light passing.
- A. Mirroring film
  - B. Doubling film
  - C. Polarizing film
  - D. Blurring film
- (2 marks)
39. Which one of the following is **NOT** a common challenge in implementing data security?
- A. Balancing accessibility with security
  - B. Keeping up with evolving encryption standards
  - C. Ensuring reliable purchasing of computer hardware
  - D. Ensuring that employees understand and follow data security protocols
- (2 marks)
40. A tool used to track IT service requests, events, incidents and alerts that might require additional action from specialists and technicians is known as:
- A. IT ticketing system
  - B. User requests module
  - C. Repair schedule
  - D. Response schedule
- (2 marks)
41. Which one of the following is **NOT** a key element of systems integration?
- A. Understanding the goal
  - B. Planning the project
  - C. Recruiting the personnel
  - D. Executing the plan
- (2 marks)
42. Which one of the following refers to the practice of soaking electronic circuits in powerful sulphuric, hydrochloric or nitric acid solutions to separates metals from the electronic pathways in e-waste management?
- A. Melting
  - B. Acid Bath
  - C. Acid kiln
  - D. E-smelting
- (2 marks)
43. Which one of the following motherboard form factor has the highest number of random-access slots?
- A. Micro ITX
  - B. Standard ATX
  - C. Extended ATX
  - D. Micro ATX
- (2 marks)
44. Which one of the following refers to the category of computer hardware tools that support computer assembly and installation?
- A. Cleaning tools
  - B. Electro-static discharge (ESD) tools
  - C. Hand tools
  - D. Diagnostic tools
- (2 marks)

45. Which one of the following software tools will provide information about hardware resource usage and performance relating to the system's individual apps and processes?  
A. Task Manager  
B. Event Viewer  
C. Performance Monitor  
D. Network Troubleshooter (2 marks)
46. Which one of the following types of data security controls operate at the systems connection level?  
A. Operational  
B. Response  
C. Architectural  
D. Visibility (2 marks)
47. Which one of the following is **NOT** an ICT training method that will keep trainees attentive and involved?  
A. Quizzes  
B. Small group discussions  
C. Email  
D. Case studies (2 marks)
48. Which one of the following methods may **NOT** be used to solve “Apps Not Responding” error message?  
A. Run advanced file management utility  
B. Clean boot  
C. Check app compatibility  
D. Close all the other programs (2 marks)
49. Which one of the following is **NOT** a way of fixing “the computer does not boot problem”?  
A. Checking the power source  
B. Resetting the RAM  
C. Booting from the safe mode  
D. Updating the drivers (2 marks)
50. Kentex College purchased a computer with processor type: Intel Core i5-9400T. What does the suffix T on the code mean?  
A. Optimised for efficient desktop computing  
B. Unlocked for overclocking  
C. High-performance graphics  
D. Optimised for laptop power efficiency (2 marks)
- .....



**DIPLOMA IN DATA MANAGEMENT AND ANALYTICS (DDMA)**

**DIPLOMA IN COMPUTER NETWORKS AND SYSTEMS ADMINISTRATION (DCNSA)**

**LEVEL I**

**INFORMATION SYSTEMS SUPPORT AND INTEGRATION**

**TUESDAY: 23 April 2024. Morning Paper.**

**Time Allowed: 2 hours.**

**Answer ALL questions by indicating the letter (A, B, C or D) that represents the correct answer. This paper is made up of fifty (50) Multiple Choice Questions. Each question is allocated two (2) marks.**

1. Vincent, a technician noted the symbol shown in Figure 1 below on several electronic components. What is the meaning of the symbol?



Figure 1

- A. Turn left, right then move downwards  
B. Do not open unless equipment is cool  
C. Electric hazard  
D. Press once if in danger (2 marks)
2. Which one of the following is a communication device that regenerates signals as they travel over long distances?  
A. Router  
B. Repeater  
C. Modem  
D. Bridge (2 marks)
3. What is the function of a power supply unit in a computer?  
A. To convert alternating current to direct current  
B. To convert direct current to alternating current  
C. To convert existing passive current to active current  
D. To insulate and switch power in electronic devices (2 marks)
4. Which one of the following is **NOT** an application of freeze sprays in computer support and maintenance?  
A. Repairing hairline cracks in printed circuit boards traces and defective solder joints  
B. Diagnosing defective electronic components on printed circuit boards, motherboards and other devices  
C. Protecting heat sensitive components during soldering and de-soldering  
D. Quickly cooling solder joints (2 marks)
5. Which one of the following is **NOT** a characteristic of BTX motherboard form factor?  
A. An increased number of expansion slots  
B. Increased processor speed to handle complex tasks  
C. Better electrical and thermal regulation  
D. Multiple system sizes and configurations (2 marks)

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6. Which one of the following is a type of processor that has four cores, allowing it to perform multiple tasks simultaneously and independently?
- A. Dual core
  - B. Quad core
  - C. Single core
  - D. Octa core
- (2 marks)
7. Alice was required to troubleshoot a computer visual display unit that was not displaying the graphical user interface after the power on self-test (POST). Which of the following is a possible cause of the problem?
- A. Monitor not compatible with system unit
  - B. Monitor had overheating problem
  - C. Faulty monitor power button
  - D. Faulty graphics card or video card
- (2 marks)
8. Suggest the possible problem of the computer that is extremely slow when opening and executing application programs?
- A. Errors in operating system or corrupted program files
  - B. Loading programs whose source is unknown
  - C. The user is in unnecessary hurry
  - D. Installing programs that are very new in the market
- (2 marks)
9. Which one of the following materials and equipment can be used to clean a computer keyboard?
- A. Soap and water
  - B. Toilet paper
  - C. Canned air
  - D. Spongy cloth
- (2 marks)
10. Which one of the following is **NOT** a way of fixing a frozen computer screen?
- A. Close your frozen computer programs
  - B. Close file explorer on windows
  - C. Check for uninstalled updates and install them
  - D. Scan for malware
- (2 marks)
11. Which one of the following is **NOT** a cause of slow internet?
- A. Full browser history
  - B. Too many devices are online
  - C. Recent reset of communication equipment
  - D. Congested access point
- (2 marks)
12. Which one of the following is a negative effect of e-waste?
- A. Increased cancer cases
  - B. Climate change effects
  - C. Soil pollution
  - D. Donation of faulty computers
- (2 marks)
13. Which one of the following is **NOT** a computer hardware upgrading activity?
- A. Installing more RAM
  - B. Adding a faster SSD
  - C. Installing a new version of antivirus software
  - D. Replacing an outdated network card
- (2 marks)
14. Which one of the following is an example of computer-based training method?
- A. LCD projector method
  - B. E-mailing method
  - C. Webinar method
  - D. Google method
- (2 marks)
15. Which one of the following will act as a reference to employees in the organisation when they need to troubleshoot a printer or upgrade security on a laptop?
- A. Help desk
  - B. Peer support
  - C. Online desk
  - D. Information centre
- (2 marks)

16. A computer user complains that his computer has booted up but the monitor remains blank. What is the first thing to do?
- A. Check for lines and patterns on the screen
  - B. Check for loosely connected monitor cables
  - C. Shut down the computer then turn it on again
  - D. Replace the monitor with a different one
- (2 marks)
17. Which type of mouse uses LED sensor technology?
- A. Trackball
  - B. Wired
  - C. Optical
  - D. Wireless
- (2 marks)
18. Which one of the following commands can be used to delete temporary files in a computer?
- A. %temp&
  - B. %temp%
  - C. %delete%
  - D. %remove%
- (2 marks)
19. Which one of the following is a **BENEFIT** of using online support materials instead of user guides?
- A. Renowned authors write online support materials as opposed user-guide authors
  - B. Online support materials are more detailed compared to user-guides
  - C. Online support materials are editable unlike user-guides
  - D. Online support materials are accessible from anywhere compared to user-guides
- (2 marks)
20. Which one of the following is a cloud-based software development tool that enables developers to share and review code and manage software projects?
- A. GitHub
  - B. Click Up
  - C. Azure
  - D. Atom
- (2 marks)
21. Albert is trying to connect to a Bluetooth device right next to him, but cannot find any Bluetooth devices listed on his PC. Which of the following options would you suggest to help him solve the problem?
- A. Enable the 'force stop' option
  - B. Update the device's firmware
  - C. Turn on the discoverable feature
  - D. Increase the Bluetooth range
- (2 marks)
22. Which one of the following is an example of confidential data?
- A. Proprietary information
  - B. Social security number
  - C. Internal-only memos
  - D. Job descriptions
- (2 marks)
23. Which one of the following is **NOT** a safety precaution observed when assembling or disassembling a computer?
- A. Wear an anti-static wrist strap
  - B. Handle components with care and use proper tools
  - C. Avoid touching anything unless you are specialist
  - D. Turn off and unplug the power source
- (2 marks)
24. Name the laptop input device, which is normally a flat surface that is manipulated with a finger to control the mouse pointer.
- A. Touch ball
  - B. Touch pad
  - C. Ipad
  - D. Dual pad
- (2 marks)

25. Match the following types of computer maintenance and the circumstance that may cause the need for each.

S/No			
I	Predictive	W	Solve a problem that has occurred in a computer
II	Preventive	X	Develop the main system of a computer to help the PC in performing more efficiently
III	Corrective	Y	Prevent possible failures and enhance the overall computer functioning
IV	Evolutionary	Z	Prevent some potential problems that can occur

- A. I-Y, II-Z, III-W, IV-X  
 B. I-Z, II-Y, III-X, IV-W  
 C. I-W, II-X, III-Z, IV-Y  
 D. I-X, II-W, III-Y, IV-Z (2 marks)
26. Which one of the following is **NOT** a type of system integration method?  
 A. Vertical integration  
 B. Mesh integration  
 C. Star integration  
 D. Horizontal integration (2 marks)
27. The data protection method that involves the changing of plain text into coded data is referred to as \_\_\_\_\_.  
 A. Data decryption  
 B. Access control  
 C. Data encryption  
 D. Data masking (2 marks)
28. Which one of the following computer diagnostic tools can be used to measure current in a computer system circuit board?  
 A. Ammeter  
 B. Tester  
 C. Multi meter  
 D. Voltmeter (2 marks)
29. Which one of the following is a purpose of data authentication?  
 A. To convince the user that the data has been altered  
 B. To certify the origin of the data  
 C. To allow users to access data  
 D. To encrypt the data (2 marks)
30. Which one of the following types of dustbins can be used for e-waste materials?  
 A. Black dustbins  
 B. Yellow dustbins  
 C. White dustbins  
 D. Blue dustbins (2 marks)
31. Which one of the following is the type of computer backup that results in copying only the data that has changed since the last backup operation?  
 A. Full backup  
 B. Incremental backup  
 C. Differential backup  
 D. Cloud backup (2 marks)
32. Which one of the following types of access control will provide access rights to computer users depending upon the rules already set by the administrators?  
 A. Discretionary Access Control (DAC)  
 B. Role-Based Access Control (RBAC)  
 C. Attribute-Based Access Control (ABAC)  
 D. Tuple-Based Access Control (TBAC) (2 marks)



33. Which one of the following computer problems is **NOT** likely to emanate from power line noise?  
A. System lockups  
B. Audio static  
C. Data loss  
D. Lost revenue (2 marks)
34. \_\_\_\_\_ is a computer diagnostic software that is used to show a timeline of history of events and errors that occurred in the system.  
A. Process explorer  
B. HWiNFO  
C. Reliability monitor  
D. CPU-Z (2 marks)
35. Which one of the following assists with input and output to printers by holding data in special areas to avoid holding up the CPU?  
A. Caching  
B. Binding  
C. Spooling  
D. Docking (2 marks)
36. Which one of the following access control mechanisms are implemented using software programs?  
A. Physical controls  
B. Logical controls  
C. Program controls  
D. Systems controls (2 marks)
37. Which one of the following is **NOT** an example of physical access control system to computer premises?  
A. CCTV cameras  
B. Biometric  
C. Passwords  
D. Security guards (2 marks)
38. Which one of the following is the **MOST** appropriate tool for removing debris and dust in a hard to reach area of a computer?  
A. Long nose pliers  
B. Foam swabs  
C. Lint-free cloth  
D. Moist mop (2 marks)
39. Which one of the following **BEST** describes the computing process of hiding data by modifying its original letters and numbers?  
A. Data authentication  
B. Data scrubbing  
C. Data encryption  
D. Data masking (2 marks)
40. Which one of the following **BEST** describes the vertical integration?  
A. A business strategy in which a company gains control of its competitors  
B. A business strategy in which data is extracted, loaded and transformed  
C. A business strategy in which a company purchases its upstream suppliers  
D. A business strategy in which a company trades online with no intermediaries (2 marks)
41. Which one of the following is **NOT** a major component of a hardware-integrated system?  
A. Firmware  
B. Sensors  
C. Communications  
D. Software (2 marks)

42. Which one of the following statements **BEST** describes the term wizard as used in computer support?
- A. A document on a computer that shows how to use a computing device or program in a series of easy stages
  - B. A feature that produces information on the screen to aid the user in their current task
  - C. A user interface that leads a user through a sequence of small steps to configure a program for the first time
  - D. A document designed for an end user to use computer properly or to find solutions to problems that arise through use
- (2 marks)

43. Figure 2 shows ports used in a computer. Select the I/O devices that connect to each.

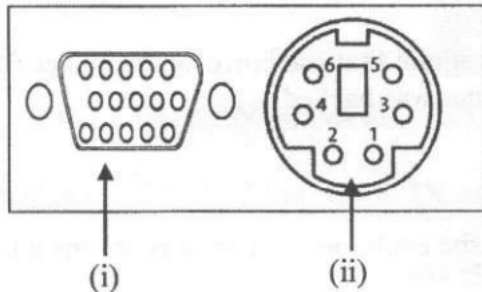
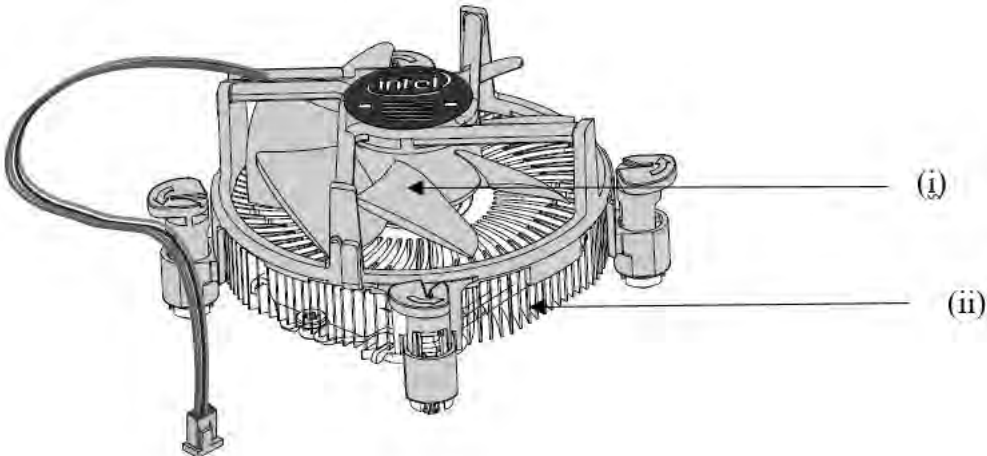


Figure 2

- A. (i) Mouse (ii) Printer
  - B. (i) Speaker (ii) Mouse
  - C. (i) Monitor (ii) Mouse
  - D. (i) Keyboard (ii) Microphone
- (2 marks)

44. Figure 3 below shows part of a motherboard. Identify the parts labeled (i) and (ii).



- A. (i) Fan (ii) Base
  - B. (i) Fan (ii) Heat sink
  - C. (i) CPU (ii) Fan
  - D. (i) Thermal paste (ii) Fan
- (2 marks)

45. Which one of the following tools can be used to clean RAM chips?
- A. Prophylaxis alcohol
  - B. Glass cleaner
  - C. Compressed air
  - D. Vacuum cleaner
- (2 marks)

46. Which one of the following cannot be classified as a reason why the computer system would not turn on?
- A. Faulty power supply unit
  - B. Faulty microprocessor
  - C. Faulty power cable
  - D. Faulty wall socket
- (2 marks)

47. Which one of the following describes the activity when computer users use their own experiences to help each other?
- A. Online support
  - B. User support
  - C. Help desk support
  - D. Peer support
- (2 marks)
48. Identify a circumstance under which a user could upgrade the computer processor.
- A. To increase the memory capacity of the computer
  - B. To enhance the processing speed of the computer
  - C. To enable a replacement of the motherboard
  - D. To allow for addition of more peripheral devices
- (2 marks)
49. The preventive maintenance that entails precautionary steps taken to protect a computer from the environment, such as using power-protection devices is referred to as \_\_\_\_\_.
- A. Active
  - B. Passive
  - C. Vibrant
  - D. Regular
- (2 marks)
50. Which one of the following **CANNOT** be classified as a system integration method?
- A. Integration by substitution
  - B. Integration by parts
  - C. Integration using functional identities
  - D. Integration by partial fractions
- (2 marks)
- .....



**DIPLOMA IN DATA MANAGEMENT AND ANALYTICS (DDMA)**

**DIPLOMA IN COMPUTER NETWORKS AND SYSTEMS ADMINISTRATION (DCNSA)**

**LEVEL I**

**INFORMATION SYSTEMS SUPPORT AND INTEGRATION**

**TUESDAY: 5 December 2023. Morning Paper.**

**Time Allowed: 2 hours.**

**Answer ALL questions by indicating the letter (A, B, C or D) that represents the correct answer. This paper is made up of fifty (50) Multiple Choice questions. Each question is allocated two (2) marks.**

1. Which of the following devices is **BEST** suited to store the operating system files?  
A. USB  
B. SSD  
C. DVD  
D. LCD (2 marks)
2. Joy complained that her laptop refused to turn off after shutdown using the start button. Which of the following is a possible cause of this problem?  
A. Faulty or incompatible driver  
B. A firewall on the computer  
C. Sound quality on computer  
D. Antivirus software installed (2 marks)
3. Which of the following is **FALSE** regarding cloud storage?  
A. The cloud service provider will never run out of disk space  
B. Users can share documents with others from anywhere  
C. The cloud service provider is solely responsible for security  
D. Data transfer rate is dependent upon the speed of Internet connection (2 marks)
4. The list below shows communication devices used with computer networks. Which one is **NOT**?  
A. Router  
B. Switch  
C. Modem  
D. Firewall (2 marks)
5. During the process of disassembling a computer, there is risk of static electricity. Which of the following physical devices cannot minimise static electricity?  
A. Wrist strap  
B. Grounding rod  
C. Floor carpet  
D. Workbench (2 marks)
6. Which of the following methods of providing support in a computing environment would be **BEST** suited for a banking hall with 20 tellers serving clients?  
A. Online  
B. Help desk  
C. Peer  
D. Lecture (2 marks)

7. Which of the following devices can be connected or disconnected to change the settings or configuration of a particular component?
- A. Jumper
  - B. Socket
  - C. Plug
  - D. Switch
- (2 marks)
8. Working on a computer can cause health and safety issues. Which of the following methods **CANNOT** alleviate wrist pain?
- A. Proper positioning of computer
  - B. Take frequent breaks
  - C. Going to the Gym
  - D. Use ergonomic keyboard
- (2 marks)
9. Joan's laptop is malfunctioning and the technician has traced the problem to a customer replaceable unit. Which of the following components is a customer replaceable unit?
- A. Power supply unit
  - B. Motherboard
  - C. Hard disk drive
  - D. UPS
- (2 marks)
10. Which of the following is an inbuilt software diagnostic tool on Windows operating environment?
- A. Reliability Monitor
  - B. Wi-Fi Analyser
  - C. Resource monitor
  - D. Performance Monitor
- (2 marks)
11. Rashid's computer has the following signs:
- (i) Failing to boot
  - (ii) Random shutdowns
  - (iii) Overheating
  - (iv) Strange noises
- Suggest the possible cause of this problem
- A. Failing power supply unit
  - B. Failing hard disk
  - C. Failing processor
  - D. Failing motherboard
- (2 marks)
12. Which type of data security enables an organisation to hide data by concealing and replacing specific letters or numbers?
- A. Masking
  - B. Encryption
  - C. Backup
  - D. Authentication
- (2 marks)
13. Below are some benefits of system integration. Which one is **NOT**?
- A. Improved data accuracy
  - B. Improved security of data
  - C. Increased productivity
  - D. Faster decision-making
- (2 marks)
14. Select from the list below a method of system integration.
- A. One-to-many
  - B. Point-to-point
  - C. Circular
  - D. Aggregation
- (2 marks)

15. Sally is considering upgrading the processor of a desktop computer. The new processor will have all the following **EXCEPT**?
- A. More cores
  - B. Higher clock speed
  - C. Higher socket size
  - D. More cache memory
- (2 marks)
16. James intends to dispose a number of old computers from his organisation. Propose one safe method he could use to dispose these computers.
- A. Give a Certified Recycler
  - B. Burning in open field
  - C. Thrown into water
  - D. Dumping in forest
- (2 marks)
17. Suggest the name of a user interface that leads a user through a sequence of small steps to configure a program for the first time.
- A. Tutorial
  - B. Wizard
  - C. Help
  - D. Manual
- (2 marks)
18. Which of the following is **NOT** a symptom of computer monitor failure experienced by users?
- A. Flickering
  - B. Black screens
  - C. Missing half screens
  - D. Loose pixels
- (2 marks)
19. For each of the scenario, state the most appropriate type of memory applicable:
- (i) Compensate for physical memory shortages by temporarily transferring data from random access memory to disk storage
  - (ii) Stores data that is frequently used by the processor
  - (iii) Data can be erased and reprogrammed repeatedly by applying an electrical voltage
  - (iv) Data is permanently stored in a chip
- A. (i) cache, (ii) RAM, (iii) EEPROM, (iv) ROM
  - B. (i) flash, (ii) ROM, (iii) EPROM, (iv) RAM
  - C. (i) CMOS, (ii) PROM, (iii) RAM, (iv) PROM
  - D. (i) BIOS, (ii) RAM, (iii) EPROM, (iv) ROM
- (2 marks)
20. During a training session, John decided to use a computer-based training method. Select from the list below a disadvantage emanating from using this method.
- A. Lack of trainee concentration
  - B. Low understanding of concepts
  - C. Lack of human interaction
  - D. Poor time management
- (2 marks)
21. Rajab was required to troubleshoot a computer that a malicious software disrupted its memory operations. Select the **MOST** probable type of computer virus that he identified.
- A. Resident
  - B. Boot Sector
  - C. Parasitic
  - D. Polymorphic
- (2 marks)
22. Suggest the name of technology that allows an operating system to detect and configure internal and external peripherals as well as most adapters as soon as they are connected.
- A. Installation
  - B. Plug and Play
  - C. Mounting
  - D. Interfacing
- (2 marks)

23. Below are some causes of data loss in computers, which one is **NOT**?  
A. Human error  
B. Power outages  
C. Strong password  
D. Viruses and malware (2 marks)
24. Harry was required to repair a client's monitor. Select from the list below a hand tool he will **NOT** use on the job.  
A. Compressed air  
B. Manufacturer manual  
C. Needle-nosed pliers  
D. Digital multi meter (2 marks)
25. Daughter boards are commonly used when assembling computers. Which of the following is **NOT** an example of daughter boards in computers?  
A. RAM DIMMs  
B. Network cards  
C. Graphics Cards  
D. Motherboard (2 marks)
26. Which method of detecting memory errors adds a bit to the original data for checking errors at the receiver end?  
A. Parity  
B. Non-parity  
C. Bitwise  
D. Hashing (2 marks)
27. Amani noted that some of the documents in his computer were encrypted and he was forced to pay a certain fee through Internet to decrypt the files. Identify this type of attack.  
A. Fileless  
B. Adware  
C. Ransomware  
D. Spyware (2 marks)
28. Which of the following is **NOT** a type of computer maintenance?  
A. Predictive maintenance  
B. Diagnostic maintenance  
C. Preventive maintenance  
D. Corrective maintenance (2 marks)
29. Which of the following statements regarding computer power supply is likely to be **CORRECT**?  
A. Laptop chargers are replaceable and meant to be interchangeable  
B. It is necessary to fully discharge a laptop battery before charging it  
C. Overheating the computer or AC adapter could cause system failure  
D. An exhausted or drained battery can cause electric shock and injuries (2 marks)
30. Which of the following is an example of an entrapment technique used to snare intruders?  
A. Honey pot  
B. Crackers  
C. Zero day  
D. Secure switch (2 marks)
31. Identify from the list below a type of backup that copies data to a location which is accessible when a computer does not have an internet connection?  
A. Central  
B. Local  
C. Online  
D. Offline (2 marks)
32. Which of the following features saves data to the hard disk drive when the computer automatically shuts down because of a low battery condition?  
A. Shut down  
B. Log off  
C. Sleep mode  
D. Hibernate (2 marks)

33. Which of the following laptop signals indicate that an AC adaptor is connected and the battery is charging?
- A. Green light
  - B. Orange light
  - C. No light
  - D. Red light
- (2 marks)
34. A computer student recently came across the following message on his computer: "ERROR 0271: Check date and time settings". What is the likely cause of this problem?
- A. SSD battery
  - B. UPS battery
  - C. CMOS battery
  - D. SOAP battery
- (2 marks)
35. Suggest the **MOST** appropriate term for use of computer-based techniques such as hacking as a form of civil disobedience to promote a political agenda or social change.
- A. Internet activism
  - B. Social activism
  - C. Hack attack
  - D. Hackathon
- (2 marks)
36. Which of the following may not be a possible cause of a dead laptop?
- A. Motherboard problem
  - B. Power adapter problem
  - C. Faulty RAM
  - D. Multimedia failure
- (2 marks)
37. What is the purpose of disk cleanup utility feature in a computer?
- A. Allows adding new hardware components to the computer system
  - B. Freeing up space on hard disk by deleting temporary files from device
  - C. Restoring data that has been physically damaged or corrupted or deleted
  - D. Places files and folders in their proper place after disk repair
- (2 marks)
38. Which of the following strategies **BEST** describe a method to continue functioning until normal computer operations are restored?
- A. Business continuity plan
  - B. Backup and restore plan
  - C. Disaster recovery plan
  - D. Computer support plan
- (2 marks)
39. Which of the following controls may involve documenting an event or intrusion and providing evidence for subsequent action against the individuals involved?
- A. Preventive controls
  - B. Detective controls
  - C. Corrective controls
  - D. Investigative controls
- (2 marks)
40. Which of the following is **NOT** a psychological effect of technology in health?
- A. Isolation
  - B. Depression
  - C. Eyestrain
  - D. Anxiety
- (2 marks)
41. Which of the following is **NOT** an example of denial of service attack?
- A. Man in the middle attack
  - B. Ping of death attack
  - C. DNS recursion attack
  - D. UDP flood attack
- (2 marks)



42. A user encountered the following error: "Operating system not found".
- Which of the following is a likely cause?
- A. Type or RAM installed
  - B. Incorrect BIOS configuration
  - C. Language used in operating system
  - D. Network interface controller
- (2 marks)
43. Which of the following is not associated with online technical support?
- A. 24/7 phone support
  - B. Chat support agents
  - C. Built-in troubleshooter
  - D. Electronic mail support
- (2 marks)
44. Which of the following ports is **MOST** suitable for connecting a printer?
- A. HDMI
  - B. USB
  - C. VGA
  - D. PS/2
- (2 marks)
45. The cost of lost productivity in hardware or software failures, causing the system to be unavailable for processing and user tasks is referred to as:
- A. Maintenance
  - B. Support
  - C. Downtime
  - D. Training
- (2 marks)
46. Which of the following methods can fix a "PC not booting after a new processor is installed" issue?
- A. Check graphics adapter
  - B. Testing the CPU fan
  - C. Updating the BIOS
  - D. Removing boot device
- (2 marks)
47. When printing student handouts, the printer displayed a red light blinking signal. Which of the following is **NOT** a possible solution to this problem?
- A. Check paper supply
  - B. Check for paper jam
  - C. Check for low ink cartridge
  - D. Check the power source
- (2 marks)
48. In a computing environment, suggest the name for a single point of contact for users in need of technical support.
- A. Help desk
  - B. Call center
  - C. Hotline
  - D. Helpline
- (2 marks)
49. Which of the following is **NOT** a possible cause of a monitor showing fuzzy images?
- A. Resolution settings
  - B. Graphics drivers
  - C. Monitor brand
  - D. Damaged cable
- (2 marks)
50. Which of the following statements is **TRUE** about LCD and CRT monitors?
- A. CRT monitors are energy efficient than LCD monitors
  - B. LCD monitors have a lower refresh rate than CRT monitors
  - C. CRT monitors have a larger viewing angle than LCD monitors
  - D. LCD monitors consume more power than CRT monitors
- (2 marks)
- .....



**DIPLOMA IN DATA MANAGEMENT AND ANALYTICS (DDMA)**

**DIPLOMA IN COMPUTER NETWORKS AND SYSTEMS ADMINISTRATION (DCNSA)**

**LEVEL I**

**INFORMATION SYSTEMS SUPPORT AND INTEGRATION**

**SOLUTIONS**

**TUESDAY: 22 August 2023. Morning Paper.**

**Time Allowed: 2 hours.**

**Answer ALL questions by indicating the letter (A, B, C or D) that represents the correct answer. This paper is made up of fifty (50) Multiple Choice questions. Each question is allocated two (2) marks.**

1. Name the component of the system unit that contains the brain of the personal computer.
  - A. Hard drive
  - B. BIOS chip
  - C. Motherboard
  - D. Monitor(2 marks)
2. Which of the following correctly identifies the major components of central processing unit?
  - A. Arithmetic Logic Unit (ALU) and Control Unit
  - B. Control Unit (CU)
  - C. Registers
  - D. ALU, control unit, and registers(2 marks)
3. Which among the following is the fastest memory in a computer that holds information?
  - A. Register
  - B. Cache
  - C. Main memory
  - D. RAM(2 marks)
4. Which of the following is temporary storage used to hold data that is used for arithmetic and logical operations and storing its results?
  - A. ALU
  - B. PC (Program counter)
  - C. Accumulator
  - D. IR (Instruction Register)(2 marks)
5. Data moves in and out of the CPU through embedded pathways commonly known as \_\_\_\_\_.
  - A. Buses
  - B. Electronic wires
  - C. Lines
  - D. Cables(2 marks)
6. Which of the following are **NOT** input devices?
  - A. Keyboard, trackball, light pen
  - B. Barcode reader, OMR, OCR, MICR
  - C. Biometric sensor, scanner, touchscreen
  - D. Plotter, card reader, headphones(2 marks)

7. Which of the following is **NOT** a type of mouse?  
A. Wireless mouse  
B. Optical mouse  
C. Mechanical mouse  
D. Electromechanical mouse (2 marks)
8. Which of the following devices provide surge protection and battery backup power during a power outage?  
A. BIOS  
B. CPU  
C. UPS  
D. USB (2 marks)
9. What is the name of a temporary storage location attached to central processing unit for input and output operations?  
A. Memory chip  
B. Register  
C. Buffer  
D. Core (2 marks)
10. Which of the following is a memory permanently built into a computer?  
A. RAM  
B. ROM  
C. CPU  
D. CD-ROM (2 marks)
11. When disassembling system unit which of the following would be the first step?  
A. Open the cover  
B. Remove the system fan  
C. Unplug the power  
D. Removing the CPU (2 marks)
12. When disassembling a system unit which of the following would be the last step?  
A. Remove the CPU fan  
B. Remove the hard drive  
C. Remove the motherboard  
D. Remove the RAM (2 marks)
13. Tools are necessary in disassembling computer system unit, which of the following tools is widely used by technicians?  
A. Anti-static wrist strap  
B. Long nose plier  
C. Foil  
D. Screwdriver (2 marks)
14. Before starting computer disassembly, make sure to prepare the following tools **EXCEPT**:  
A. Set of screwdrivers  
B. Container for the screw  
C. Computer Unit  
D. Anti-static device (2 marks)
15. The integration structure that connects multiple apps in a single line, moving from the start of a process to the end of a process, frequently with the goal of consolidating the organisation's complete tech stack is referred to as?  
A. Vertical integration  
B. Point to point integration  
C. Star integration  
D. Horizontal integration (2 marks)

16. Which of the following would be a logical first step in troubleshooting a personal computer?
- A. Check the computer CMOS
  - B. Define the circumstances of the problem
  - C. Call the vendor
  - D. Define what applications are being used
- (2 marks)
17. Which of the following would you do first when troubleshooting a faulty monitor?
- A. Check its connections to the computer and power source
  - B. Use a meter to check the CRT and internal circuitry for continuity
  - C. Power down the monitor, then turn it on again to see if that corrects the problem
  - D. Power down the computer, then turn it on again to see if that corrects the problem
- (2 marks)
18. You have a personal computer with no video display output. Which of the following is **LEAST** likely to be causing the problem?
- A. Defective RAM
  - B. Defective microprocessor
  - C. Crashed hard drive
  - D. Loose video card
- (2 marks)
19. When connecting a ribbon cable to a connector, how do you know which direction to plug it in?
- A. The red line in the cable goes to the highest pin number
  - B. The colored line in the cable goes to pin #1
  - C. It does not matter
  - D. The blue or red line in the cable goes away from the power connector
- (2 marks)
20. What is the first step in diagnosing a completely dead computer at the client site that was working the day before?
- A. Test the power supply
  - B. Replace the CMOS battery
  - C. Check the AC outlet
  - D. Reset the hard drive controller cable
- (2 marks)
21. A workstation has just been installed on an Ethernet LAN, but cannot communicate with the network. What should you check first?
- A. Reinstall the network protocols
  - B. Reinstall the network interface card driver
  - C. Verify the IP configuration on the workstation
  - D. Verify the link status on the computer's network card
- (2 marks)
22. One of the major components of a personal computer is the Central Processing Unit, which can **BEST** be described as \_\_\_\_\_.
- A. The device that sends the monitor signals telling it what to display
  - B. The area that regulates all of the system power usage
  - C. The area where all the of the Basic input/output routines are stored
  - D. The area where all of the processing takes place
23. How many pins does an IDE cable have?
- A. 25
  - B. 50
  - C. 100
  - D. 40
- (2 marks)
24. An important first step in troubleshooting a jammed laser printer is to \_\_\_\_\_.
- A. Note where in the paper path the paper stops
  - B. Check all voltages
  - C. Look up to error codes
  - D. Turn the printer off, then on again
- (2 marks)

25. What should you replace if the brightness or contrast adjustments were malfunctioning on a laptop?  
A. Fuse  
B. LED display  
C. Adjustment switch  
D. LED display cable (2 marks)
26. The monitor power light is ON but the monitor screen is completely dark. The least likely cause of the problem is \_\_\_\_\_.  
A. Defect in the computers video circuitry  
B. Disconnected video cable  
C. Defective monitor  
D. System RAM problem (2 marks)
27. What is your first action when windows report that your hard drive is developing bad sectors?  
A. Replace the hard drive  
B. Run Sec-clean from DOS  
C. Run defrag on the hard drive  
D. Run scandisk with the "thorough" option (2 marks)
28. Which of the following controller would support an external CD-ROM drive?  
A. ESDI  
B. ARLL  
C. MFM  
D. SCSI (2 marks)
29. How many Direct Memory Access (DMA) channels are there in an AT class personal computer?  
A. 8  
B. 3  
C. 4  
D. 7 (2 marks)
30. Which of the following is a key requirement of every video card?  
A. CMOS  
B. RAM  
C. CPU  
D. UPS (2 marks)
31. Which of the following **BEST** describes a fragmented hard drive?  
A. The platters are bad  
B. Data files are corrupted  
C. Clusters of data are damaged  
D. Files are not stored in consecutive clusters (2 marks)
32. Devices that are under control of a computer and are directly connected to it are said to be?  
A. Off-line devices  
B. On-line devices  
C. IN gate devices  
D. IF gate devices (2 marks)
33. What is the correct name for a silicon piece with an embedded circuit?  
A. Chip  
B. Circuit  
C. Logical gate  
D. Circuit network (2 marks)
34. Which of the following is an example of records online?  
A. On removable media  
B. Document files  
C. Dedicated archive server  
D. DVD drives (2 marks)
35. Which of the following will **NOT** help in secure disposal of data?  
A. Keep records carefully

- B. Destroy the data  
C. Destroy the device  
D. Destroy access (2 marks)
36. Which cyber security principle states that security mechanisms should be as simple and small as possible?  
A. Fail-safe defaults  
B. Least privilege  
C. Economy of mechanism  
D. Open design (2 marks)
37. Which cyber security principle restricts initialisation of privileges whenever a subject or object is created?  
A. Fail-safe defaults  
B. Least privilege  
C. Complete mediation  
D. Open design (2 marks)
38. Select from the list below the process of retaining or keeping of data at a secure place for long-term storage.  
A. Data archiving  
B. Archival storage  
C. Disposal of data  
D. Backup (2 marks)
39. Which of the following statements focuses on the detection and prevention of sensitive data exfiltration and lost data?  
A. Data loss measurement  
B. Data stolen software  
C. Data loss prevention  
D. Data leak prevention (2 marks)
40. Suggest the name given to unauthorised movement of data.  
A. Data exfiltration  
B. Data infiltration  
C. Data cracking  
D. Database hacking (2 marks)
41. Which of the following statements correctly defines the term system integration?  
A. One system into multiple program  
B. Multiple systems into multiple program  
C. Two systems into one program  
D. Multiple systems into one program (2 marks)
42. Which of the following statements is **NOT** an advantage of system integration?  
A. Improve system security  
B. Real time data  
C. An integrated future  
D. Easier for administrators (2 marks)
43. Which of the following is **NOT** a type of data backup?  
A. Full backup  
B. Incremental backup  
C. Mirror backup  
D. Adaptable backup (2 marks)
44. All types of system integration are designed to automate activities and processes, synchronise data, and connect systems into a single entity. Which one of the following is **NOT** a type of system integration?  
A. Enterprise Application Integration (EAI)  
B. Security Integration  
C. Data Integration (DI)  
D. Electronic Document Integration (EDI) (2 marks)
45. Which type of integration testing does usage model testing belong to?  
A. Big Bang  
B. Top-down

- C. Bottom-up  
D. Sandwich (2 marks)
46. Repetitive Strain Injury (RSI) is a problem that people experience and it affects \_\_\_\_\_.  
A. Their backs  
B. Their legs  
C. Their necks  
D. Their hands and wrists (2 marks)
47. Which of the following statements **BEST** explains the method of keeping the computer area safe from accidents?  
A. Cables securely connected to the computer  
B. All cables routed through overhead channels well above head height  
C. All cables tied together  
D. Cables kept tidy and secure, and not allowed to trail through any areas where people could walk (2 marks)
48. What is the **CORRECT** method for cleaning a computer monitor screen?  
A. Clean the screen using hot soapy water and dry off with a soft lint free cloth  
B. Clean the screen carefully with a specially prepared cleaning wipe and dry off with a soft lint free cloth  
C. Clean the screen using cold soapy water and dry off with a yellow duster  
D. Clean the screen using any proprietary window cleaning spray and dry off with a soft tissue (2 marks)
49. Which one of the following is an example of e-waste?  
A. Nuclear waste, medical waste, toxic industrial waste  
B. Plastic bags, cardboard boxes, corroded metals, etc  
C. Beverage cans, packaged boxes, plastic bottles, etc  
D. Cables, alarms, motherboards, TV (2 marks)
50. Suggest the **MOST** appropriate method for e-waste disposal.  
A. Burning  
B. Recycling  
C. Disintegration  
D. Landfilling (2 marks)
- .....



**DIPLOMA IN DATA MANAGEMENT AND ANALYTICS (DDMA)**

**DIPLOMA IN COMPUTER NETWORKS AND SYSTEMS ADMINISTRATION (DCNSA)**

**LEVEL I**

**INFORMATION SYSTEMS SUPPORT AND INTEGRATION**

**TUESDAY: 25 April 2023. Morning Paper.**

**Time Allowed: 2 hours.**

**Answer ALL questions by indicating the letter (A, B, C or D) that represents the correct answer. This paper is made up of fifty (50) Multiple Choice Questions. Each question is allocated two (2) marks.**

1. Which of the following is an integrated circuit that serves as the primary component of all computing devices?
  - A. Silicon chip
  - B. Motherboard
  - C. Logical gate
  - D. Circuit network
2. The following are considered as most damaging things to a computer, **EXCEPT**?
  - A. Moisture
  - B. Static electricity
  - C. Dust
  - D. Cookies
3. A tool used to minimise the number of fragmented files and enhance the speed is known as?
  - A. Disk space
  - B. Defrag
  - C. Scan disk
  - D. Double space
4. Which of the following is a possible cause of paper jam in printers?
  - A. Incorrect loading of paper
  - B. Incorrectly installed cartridge
  - C. Printer out of toner
  - D. Dirty corona wire
5. Which of the following is an essential tool for cleaning a computer monitor?
  - A. Hydrogen peroxide
  - B. Lint-free cloth
  - C. Glass cleaner
  - D. All-purpose cleaner
6. Which of the following statement **BEST** defines data masking?
  - A. Refers to the process of replacing original data by using modified content to protect information
  - B. Refers to the process of altering data being input into a computer system then changing it back
  - C. Refers to the process of analysing data to reveal hidden patterns and trends in historical business activity
  - D. Refers to cleaning, transforming and cataloging data to be used for online analytical processing
7. What is the name of the most common symptom of a damaged laptop fan?
  - A. Brownouts
  - B. Rebooting
  - C. Overheating
  - D. Freezing



8. Which of the following faults is **NOT** associated with a faulty power supply unit?
- A. Electric shocks
  - B. Fan stops rotating
  - C. Corrupted drivers
  - D. Spontaneous rebooting
9. Which of the following is considered a safety risk during computer maintenance?
- A. Plug in the power supply into the wall outlet when working inside a computer
  - B. The best response to an accident is quick response by trained personnel
  - C. Organisations should have a formal incident reporting procedure for accidents
  - D. Keep all aisles and hallways free of cables that can cause customers to trip and fall
10. What is the name of the PC maintenance tool shown below?



- A. Adjustable wrench
  - B. Wire cutter
  - C. Crimping tool
  - D. Needle nose pliers
11. Which protocol provides authentication and encryption over the Internet?
- A. SET
  - B. SSH
  - C. IPSec
  - D. TCP/IP
12. Which one of the following is **NOT** a proper attire to wear when working with lab equipment?
- A. Non-static wrist strap
  - B. Gloves
  - C. Protective glasses
  - D. Open heel shoes
13. Which of the following works as an intermediary between a workstation user and the Internet for security purposes?
- A. Secret key
  - B. Firewall
  - C. Client server
  - D. Proxy server
14. Which of the following **BEST** describes digital signatures?
- A. A type of security used to secure passwords and ensure that they are not available for viewing
  - B. An electronic identification created using cryptography used to identify users in digital messages
  - C. An electronic identification used to encrypt and decrypt financial transactions on the Internet
  - D. An email protocol that authenticates the identity of both the sender and receiver to ensure privacy
15. Which part of a storage device does a boot sector virus infect?
- A. Partition tables
  - B. Floppy drive
  - C. Office documents
  - D. Computer memory
16. The following are viable reasons for conducting a computer audit, **EXCEPT?**
- A. To keep a record of changes made to user accounts and groups
  - B. To detect an intrusion using a password that has been stolen
  - C. To indicate a user who has forgotten their password
  - D. To determine whether a device is located on a remote network

17. A redundant site with infrastructure and basic utilities only used when a disaster occurs is known as?
- A. Cold site
  - B. Hot site
  - C. Warm site
  - D. Backup site
18. Which of the following can be used to revert a driver to the previously used one?
- A. System configuration utility
  - B. Uninstalling the device driver
  - C. Rolling back the device driver
  - D. Reinstalling the operating system
19. Which of the following measures is recommended before recycling electronic devices?
- A. Remove the optical drive
  - B. Installing the latest drivers
  - C. Erase data from the hard disk
  - D. Upgrade network cards
20. Which of the following is not a recommended tool for preventative maintenance?
- A. Compressed air
  - B. Lint free cloth
  - C. Static bag
  - D. Computer vacuum
21. Which of the following option is not a consideration when managing electronic waste?
- A. Redeem
  - B. Recycle
  - C. Reuse
  - D. Reduce
22. Which of the following is **NOT** found inside the system unit?
- A. Keyboard
  - B. Power supply unit
  - C. Network interface card
  - D. Random access memory
23. Which of the following is NOT a type of software maintenance?
- A. Perfective
  - B. Corrective
  - C. Adaptive
  - D. Progressive
24. What is the function of the personal computer maintenance tool shown below?



- A. To tighten or loosen screws.
- B. To hold extra computer screws, nuts and washers
- C. To unfasten clips and remove small wiring
- D. To cut the wire and strip the insulation material to uncover the wires

25. The following are benefits resulting from system integration, **EXCEPT**?
- A. Optimise business processes
  - B. Technological changes
  - C. Increased scalability
  - D. Enhancing analysis
26. Which of the statements below **BEST** describes a server?
- A. Software or hardware device that accepts and responds to requests made over a network
  - B. A group of two or more devices or nodes that can communicate
  - C. The fastest computer in the world that can process a significant amount of data very quickly
  - D. Any computer hardware or software device that requests access to a service provided by a server
27. A workstation has just been installed on an Ethernet LAN but cannot communicate with the network. What would be the first thing to check?
- A. Reinstall the network protocols.
  - B. Reinstall the network interface card driver.
  - C. Verify the IP configuration on the workstation.
  - D. Verify the link status on the computer's network card.
28. The process of keeping track by the Microsoft operating system of the contents on a hard drive is done by?
- A. File Allocation Table
  - B. File Access Table
  - C. File Index Table
  - D. File Transfer Table
29. Which of the following input device is used to convert pictures into a digital form?
- A. Keyboard devices
  - B. Drawing devices
  - C. Vision based devices
  - D. Digitizer devices
30. Which computer resource stores the software necessary to boot the computer?
- A. ROM BIOS
  - B. POST
  - C. boot.in
  - D. CONFIG.SYS
31. The process of retaining or keeping of data at a secure place for long-term storage is referred to as?
- A. Data archiving
  - B. Archival Storage
  - C. Disposal of Data
  - D. Backup
32. The process of changing the software in a flash memory chip is known as?
- A. Hardware repair
  - B. Firmware update
  - C. Hardware upgrade
  - D. Software maintenance
33. Which of the following is a simple way to fix many problems with USB devices?
- A. Buy a new device to replace the one which doesn't work.
  - B. Use a shorter cord.
  - C. Plug the device into the USB port upside down.
  - D. Run the device through a USB adapter to clean up the signal.
34. A computer displayed a strange message and on checking, no viruses were found. What would be the next thing to check?
- A. Firewall in case a hacker is trying to break into your computer.
  - B. BIOS in case Plug and Play disabled.
  - C. Computer memory (RAM) in case it's starting to fail.
  - D. Windows Updates for any patches that need installing.

35. Which of the following is **NOT** a valid way in which data integrity may be compromised?
- A. Human error, whether malicious or unintentional
  - B. Hardware repair and maintenance
  - C. Transfer errors, occurring during transfer from one device to another
  - D. Bugs, viruses/malware, hacking, and other cyber threats
36. What causes the error message "bad or missing operating system" at boot up?
- A. Missing or corrupt boot sector
  - B. Slave hard drive not powered up
  - C. A bad floppy drive cable connection
  - D. Hard disk drive is listed after removable devices in boot tab.
37. A collection of computers, network devices, peripherals, or other devices connected to allow data sharing is known as?
- A. Supercomputers
  - B. Firewire
  - C. Network
  - D. Firewalls
38. Which of the following are examples of e-waste?
- A. Nuclear wastes, medical wastes, toxic industrial wastes, etc.
  - B. Plastic bags, cardboard boxes, corroded metals, etc.
  - C. Beverage cans, packaged boxes, plastic bottles, etc.
  - D. Sensors, alarms, sirens, TV etc.
39. The act of intimidating, threatening, or coercing people online through the use of social media, email, text messages, blog posts, or other digital or electronic methods is known as?
- A. Cyber crime
  - B. Cybernetic
  - C. Cyberbullying
  - D. Cyber scanning
40. A communications centre that provides a single point of contact between an organization and its employees, customers, as well as business partners is known as?
- A. Service Desk
  - B. IT Centre
  - C. Reception area
  - D. Health Centre
41. Which of the following is **NOT** a mouse port?
- A. Serial port
  - B. Parallel Port
  - C. PS/2 port
  - D. USB port
42. The process of replacing or adding any new hardware to improve its performance is known as?
- A. Hardware upgrade
  - B. Hardware acquisition
  - C. Hardware cleaning
  - D. Hardware maintenance
43. The process of safeguarding digital information throughout its entire life cycle to protect it from corruption, theft, or unauthorised access is known as?
- A. Data encryption
  - B. Data masking
  - C. Data integrity
  - D. Data security

44. Which of the following peripheral devices will produce a hard copy?
- A. Hard disk
  - B. Plotter
  - C. Monitor
  - D. Keyboard
45. What is the name of the connection point or interface between a computer and a peripheral device?
- A. Connector
  - B. Ring
  - C. Bus
  - D. Port
46. Which of the following is a feature of non-impact printers?
- A. They are noisy
  - B. They provide good quality printouts
  - C. They are cheap
  - D. They are slow
47. Which of the following is **NOT** an advantage of online support?
- A. Log on any time
  - B. Reduces loneliness and isolation
  - C. Ability to talk openly about feelings or experiences.
  - D. Potential greater flexibility
48. The processor characteristic that allows a computer's CPU to lower its frequency for a time, prevent overheating, or save power is known as?
- A. Firmware
  - B. Overclocking
  - C. Multiprocessing
  - D. Throttling
49. Which of the following is a good reason for ICT staff training?
- A. Improves productivity at the work place
  - B. Supports the development of computer skills
  - C. Improves the financial status
  - D. Reduces staff turnover
50. A network of private computers that hackers have infected with malicious software is known as:
- A. Rootkit
  - B. Botneck
  - C. Botnet
  - D. Keylogger

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**DIPLOMA IN DATA MANAGEMENT AND ANALYTICS (DDMA)**

**DIPLOMA IN COMPUTER NETWORKS AND SYSTEMS ADMINISTRATION (DCNSA)**

**LEVEL I**

**INFORMATION SYSTEMS SUPPORT AND INTEGRATION**

**TUESDAY: 6 December 2022. Morning Paper.**

**Time Allowed: 2 hours.**

**Answer ALL questions by indicating the letter (A, B, C or D) that represents the correct answer. This paper is made up of fifty (50) Multiple Choice Questions. Each question is allocated two (2) marks.**

1. Device drivers can be described by which of the following statements in computing technology?
  - A. Hardware that allows interaction between peripheral device and the operating system.
  - B. Software that allows the user to control the operating system
  - C. Software that allows interaction between peripheral device and the operating system.
  - D. Software that allows the user to control the operating system
2. Which one of the following is **NOT** a type of Read only Memory (ROM)?
  - A. Programmable read-only memory (PROM)
  - B. Erasable Programmable read-only memory (EPROM)
  - C. Electrically erasable programmable read-only memory (EEPROM)
  - D. Dynamic random access memory (DRAM)
3. Which of the following statement is **TRUE** about Static Random Access Memory (SRAM)?
  - A. Requires a recharge every few milliseconds to maintain its data.
  - B. Holds content as long as power is available
  - C. Can store many bits per chip
  - D. Generates less heat
4. Auxiliary storage is non-volatile memory used to store data and programs for later retrieval. Which one of the following would **NOT** be considered as a form of auxiliary storage?
  - A. Floppy Disk
  - B. Optical Disk
  - C. RAM
  - D. Flash Drive
5. Ms.Kendy came into a computer parts and service store looking for device to help a person with accessibility issues to input instructions into a laptop using a pen. Which of the following devices would you recommend to accomplish the required task?
  - A. Biometric scanner
  - B. Stylus
  - C. Keyboard
  - D. Fingerprint

6. IT Technicians use an anti-static wristband to ensure any static discharge has a way to go from themselves to the ground safely. Which of the following statements describes the proper use of an anti-static wrist strap?
- A. An anti-static wrist strap should not be used in conjunction with an antistatic mat
  - B. For optimum grounding, the clip should be attached to a painted section of the computer case
  - C. An anti-static wrist strap should make contact with the skin
  - D. The anti-static wrist strip should not be attached to any grounded object
7. The term given to the main circuit board of your computer where other components are attached so that everything in your computer works together is referred to as?
- A. Central processing unit
  - B. Power supply
  - C. Hard drive
  - D. Motherboard
8. Which one of the following can be used to determine if an additional hard drive can be added for additional storage space in a computer?
- A. RAM
  - B. ROM
  - C. PATA/SATA connection
  - D. BIOS version
9. A graphic designer wants to be able to perform fast when multitasking, have amazing graphics and large capacity to store information on a laptop. You have been advised to choose between two hard drives: solid state drive (SSD) or magnetic hard drive. Which choice would work best with his needs?
- A. The SSD because it is less expensive and has moving parts to read the information on the computer
  - B. The magnetic hard drive because it is less expensive and has moving parts to read the information on the computer
  - C. The magnetic hard drive because it is faster and offers additional stability
  - D. The SSD because it is faster and offers additional stability
10. Input device is a piece of equipment used to provide data and control signals to an information processing system. Which of the following device is considered an input device?
- A. Printer
  - B. Digital camera
  - C. Projector
  - D. Speakers
11. Identify among the following the component that would be used to connect motherboard through the use of a 24-pin connector
- A. PATA optical drive
  - B. SATA drive
  - C. Power supply
  - D. Video card
12. Motherboard allocates power and allows communication to and between the CPU, RAM, and all other computer hardware components. Which of the following component controls the communications and interactions between the CPU and other components on the motherboard?
- A. Chipset
  - B. BIOS
  - C. RAM
  - D. CMOS
13. Which of the following is the speed at which the spindle in a hard drive spins?
- A. gigabytes
  - B. revolutions per minute
  - C. pages per minute
  - D. clusters per minute

14. The processor holds both data and instructions while it is processing them using permanent storage.
- A. True
  - B. False
15. Which of the following statements BEST describes Central Processing Unit (CPU).
- A. The device that sends the monitor signals telling it what to display
  - B. The area that regulates all of the system power usage
  - C. The area where all the of the Basic input/output routines are stored
  - D. The area where all of the processing takes place
16. Memory modules are computer chips used to add memory to a computer. Which memory technology allows two memory modules to be accessed at the same time?
- A. Dual channel
  - B. Double-sided
  - C. SRAM
  - D. ECC
17. A computer user called helpdesk and stated that monitor screen of the computer she is using is completely dark yet the power LED is on. What is least likely cause of the problem?
- A. Defect in the computers video circuitry
  - B. Disconnected video cable
  - C. Defective monitor
  - D. System RAM problem
18. When troubleshooting a laptop which of the following can be used to replace the brightness or contrast adjustments?
- A. Fuse
  - B. Led display
  - C. Adjustment switch
  - D. Led display cable
19. Identify among the following the first step to be taken when troubleshooting a faulty monitor?
- A. Check its connections to the computer and power source
  - B. Use a meter to check the CRT and internal circuitry for continuity
  - C. Power down the monitor, then turn it on again to see if that corrects the problem
  - D. Power down the computer, then turn it on again to see if that corrects the problem
20. Which of the following is LEAST likely to be causing the problem of a PC with no video?
- A. Defective RAM (bank zero)
  - B. Defective microprocessor
  - C. Crashed hard drive
  - D. Loose video card
21. Which of the following is a term the BEST describes components that provide internal storage to the CPU ?
- A. Registers
  - B. Program Counters
  - C. Controllers
  - D. Internal chips
22. Which of the following category of software maintenance falls under the modification of the software to match changes in the ever-changing environment?
- A. Corrective
  - B. Adaptive
  - C. Perfective
  - D. Preventive



23. Troubleshooting is a systematic approach to problem-solving that is often used to find and correct issues. Which of the following step in the troubleshooting process is important to help avoid repeating repair processes that were performed previously?
- A. Implementation of the solution
  - B. Identification of the problem
  - C. Documentation of the problem and its solution
  - D. Preparation of a plan of action
24. Which of the following will help the processor to keep all of the data in sync because the data that it needs to calculate can be retrieved when it is needed.
- A. Faster RAM
  - B. Fast EIDE drive
  - C. Liquid cooling
  - D. High capacity external hard drive
25. What is the **MOST** likely cause of the problem when the computer clock keeps losing the correct time?
- A. The operating system needs to be patched
  - B. The motherboard clocking crystal is damaged
  - C. The CPU needs to be overclocked
  - D. The CMOS battery is loose or failing
26. Which of the following procedure is BEST practice when cleaning a computer?
- A. Remove the CPU before cleaning
  - B. Hold the CPU fan to prevent it from spinning and blow it with compressed air
  - C. Invert the can of compressed air while spraying
  - D. Clean the hard drive heads with a cotton swab
27. A colleague at work complains that opening a large document file is taking longer than usual. The IT support technician suspects that there might be a fault in the hard disk. What should the technician do next?
- A. Back up the user data from the workstation
  - B. Perform the disk cleanup procedure
  - C. Contact a data recovery company for service
  - D. Replace the hard disk with a new one to pinpoint the exact problem
28. Computer preventive maintenance should be taken into consideration by a company based on which of the following reasons?
- A. It provides an opportunity for junior technicians to obtain more experience in a non-threatening or problem environment
  - B. It helps to protect the computer equipment against future problems
  - C. It enables the IT manager to check on the location and state of the computer assets
  - D. It allows the IT department to regularly monitor the contents of user hard drives to ensure computer use policies are being followed
29. Which action should be taken to fix a computer that takes a long time to boot, where the BIOS rediscover all the hardware at every boot?
- A. Start the computer with the last known good configuration
  - B. Replace the CMOS battery
  - C. Reset the BIOS using the CMOS jumper
  - D. Launch Device Manager to discover new hardware
30. Juma a notable supplier to an institution reports that the antivirus software cannot obtain updates from the intranet. IT support technician notices that the license for the software expired. He adds a new license to the software and completes the update service. What is the probable cause of action the technician should undertake?
- A. Download advanced antivirus software from another vendor
  - B. Record the new license number in the log
  - C. Review the Event Viewer for the date and time that the last software update was performed
  - D. Run a full virus scan on the computer

31. Which of the following device is used to store charges in an electrical circuit?
- A. Capacitor
  - B. Transistor
  - C. Inductor
  - D. Ionic
32. Which of the following is made up of a wrist grounding strap?
- A. Surge protector
  - B. Capacitor
  - C. Voltmeter
  - D. Resistor
33. A keyboard is for putting information including letters, words and numbers into your computer. What product is used to clean smudged keys on a keyboard?
- A. TMC solvent
  - B. Silicone spray
  - C. Denatured alcohol
  - D. All-purpose cleaner
34. A port is the jack or receptacle for some other peripheral device to plug into. What tool is used to test serial and parallel ports?
- A. High volt probe
  - B. Cable scanner
  - C. Loop backs (wrap plugs)
  - D. Sniffer
35. Which of the following component would Electrostatic discharge (ESD) cause the MOST damage?
- A. Power supply
  - B. Expansion board
  - C. Monitor
  - D. Keyboard
36. IRQ (interrupt request) availability can be checked by looking at which of the following when installing PCI NICS?
- A. Dip switches
  - B. CONFIG.SYS
  - C. Jumper settings
  - D. Motherboard BIOS
37. IDE (Integrated Drive Electronics) is an electronic interface standard that defines the connection between a bus on a computer's motherboard and the computer's disk storage devices. Which of the following should be checked first when a new IDE hard drive has been installed but the system BIOS does not recognize the new drive?
- A. Cable sequence
  - B. Jumpers on the hard drive
  - C. Drivers that need to be loaded
  - D. Hard drive manufacturer web site information
38. What one of the following is the **BEST** ground for a conductive work bench?
- A. AC outlet
  - B. Ground to bend
  - C. To another device
  - D. Chassis ground
39. Power surges happen when there is a massive spike in your electrical system's current. Which of the following helps to curb power surge?
- A. Surge suppressor
  - B. Spike protector
  - C. UPS system
  - D. High-grade multi-meter

40. Which one of the following is an electrical component that allows the flow of current in only one direction?
- A. Capacitor
  - B. Diode
  - C. Transistor
  - D. Resistor
41. An Intern at a finance corporation was assigned a computer to troubleshoot. Which of the following would be a logical first step in troubleshooting a PC?
- A. Check the computer CMOS
  - B. Define the circumstances of the problem
  - C. Call the vendor
  - D. Define what applications are being used
42. Which one of the following is a computer cursor control device used in notebook and laptop computers?
- A. Trackball
  - B. Trackpad
  - C. Trackpoint
  - D. Lasermouse
43. Which one of the following practices is considered the **BEST** way to prevent damaging a computer with static electricity?
- A. Place your PC on a rubber mat
  - B. Wear leather soled shoes
  - C. Periodically touch a safe ground point on the PC to discharge yourself
  - D. Wear an ESD wrist strap
44. Which one of the following is a software program or a hardware device that filters all data packets coming through the network?
- A. Antivirus
  - B. Firewall
  - C. Cookies
  - D. Malware
45. Which of the following terminology relates to exploring the appropriate, ethical behaviors over the internet and digital media platform?
- A. Cyber law
  - B. Cyber ethics
  - C. Cybersecurity
  - D. Cyber safety
46. Which type of data backup copies all the files that have changed since the last full backup was performed?
- A. Differential backup
  - B. Full backup
  - C. Transaction log
  - D. Cobian backup
47. The component below works when the computer is off.



- A. True
- B. False

48. Which one of the following statement **BEST** describes integration testing?
- A. To verify that system is functioning according to specified requirements
  - B. To verify that system meets user expectation and needs
  - C. To verify that system separately testable modules are functioning properly
  - D. To verify that interfaces between different parts of system are working
49. A Medium sized Company decides to migrate from Windows 8 to Windows 11, which type of testing is done to ensure whether your software works on new platform?
- A. Interoperability testing
  - B. Portability testing
  - C. Usability testing
  - D. Performance testing
50. A technician noticed that the contacts on the adapter need to be cleaned when installing a network adapter into a client computer. Which solution should the technician use to clean the contacts?
- A. Isopropyl alcohol
  - B. Mild detergent
  - C. Slightly abrasive cleanser
  - D. Glass cleaner
- .....

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**DIPLOMA IN DATA MANAGEMENT AND ANALYTICS (DDMA)**

**DIPLOMA IN COMPUTER NETWORKS AND SYSTEM ADMINISTRATION (DCNSA)**

**LEVEL I**

**INFORMATION SYSTEMS SUPPORT AND INTEGRATION**

**TUESDAY: 2 August 2022. Morning paper.**

**Time Allowed: 2 hours.**

**This paper is made up of fifty (50) Multiple Choice Questions. Answer ALL questions by indicating the letter (A, B, C or D) that represents the correct answer. Each question is allocated two (2) marks.**

1. Komu installed a new wireless mouse to use in his computer. He realised that the mouse does not work or is not detected after installation. Which one of the following is **NOT** a suitable solution?
  - A. Ensure the mouse is within the range of the receiver.
  - B. Replace the batteries in the wireless mouse.
  - C. Refer to the documentation that came with the mouse.
  - D. Clean the mouse using a cloth with cleaning agent.
2. The **MOST** effective means for a technician to prevent ESD (Electrostatic Static Discharge) damage when installing RAM is \_\_\_\_\_.
  - A. Touching grounded metal before contacting components
  - B. Ensuring the AC plug has a ground post
  - C. Wearing a grounded wristband
  - D. Wearing rubber-soled shoes
3. The following will **BEST** conserve resources and prolong equipment life, which one?
  - A. Firmware updates
  - B. Power Management
  - C. Disk Defragmenter
  - D. Clean with a lint-free cloth
4. Which of the following interfaces can support the **MOST** devices per port?
  - A. USB 1.1
  - B. Bluetooth
  - C. IEEE 1394
  - D. RS-232
5. When should antistatic devices be used?
  - A. Replacing hardware.
  - B. Lifting heavy equipment.
  - C. Updating software.
  - D. Cooling equipment.
6. The following are units of memory storage capacity. Arrange then in ascending order of size.
  - I. GB
  - II. TB
  - III. KB
  - IV. MB
  - A. I, II, III, IV
  - B. II, I, IV, III
  - C. II, IV, I, III
  - D. III, IV, I, II

7. Computer internal memory that is read /write is known as?
- ROM
  - Flash disk
  - RAM
  - DVD
8. Which one of the following is **NOT** a function of the device shown in the diagram below?



- Measuring temperature
  - Measuring voltage
  - Measuring resistance
  - Continuity test
9. A \_\_\_\_\_ is a small device that is used to check and diagnose a Power Supply Unit.
- Multimeter
  - Power supply tester
  - Anti-static tool
  - Pliers
10. Which of the following is **NOT** a safe method of cleaning a computer monitor?
- Dampen the microfiber cloth with preferably distilled water
  - Spray cleaning fluid directly onto the screen
  - Gently wipe the screen with the damp cloth
  - Wipe the monitor dry before plugging it back in
11. A personal computer has a dysfunctional USB port. Which one of the following is **NOT** a suitable solution that can fix this issue?
- Disable USB selective suspend
  - Restart the PC
  - Closed it up with a tape
  - Uninstall USB port driver
12. Blue Screen of Death (BSOD) can occur due to both software and hardware problems. Which one of the following is **NOT** a cause of BSOD?
- Corrupted drivers
  - Faulty keyboard
  - Faulty hard disk
  - Too much pressure on the RAM

13. Which one of the following is **NOT** a type of electronic waste?
- A. Computer Appliances
  - B. Monitoring Devices
  - C. Stationery
  - D. Medical devices
14. An \_\_\_\_\_ is the individual, group, organisational function or external service that an IT user calls to get support with a problem.
- A. information society
  - B. IT centre
  - C. health centre
  - D. help desk
15. Which one of the following is **NOT** a human health problem most highly associated with the use of computer equipment?
- A. Upper limb disorders
  - B. Loss of memory
  - C. Eye problems
  - D. Stress and fatigue.
16. \_\_\_\_\_ refers to moving a computer's processor speed beyond its normal operating range.
- A. Overdriving
  - B. Overpowering
  - C. Overclocking
  - D. Overlapping
17. Which one of the following is **NOT** an example of cyber bullying?
- A. Sending mean texts or IMs to someone
  - B. Bullying someone in the hallway
  - C. Being rude or mean to someone in an online game
  - D. Pretending to be someone else to spread hurtful messages online
18. The tool which should always be used when working on the inside of the computer is known as?
- A. Multimeter
  - B. Screwdriver
  - C. Antistatic strap
  - D. Crimping tool
19. Computer \_\_\_\_\_ is the practice of keeping computers in a good state of repair.
- A. Maintenance
  - B. Support
  - C. Repair
  - D. Processing
20. Which of the following printers uses toner to transfer an image onto paper?
- A. Inkjet
  - B. Laser
  - C. Impact
  - D. Thermal
21. The process by which multiple individual subsystems or sub-components are combined into one all-encompassing larger system thereby allowing the subsystems to function together is known as?
- A. System Integration
  - B. System development
  - C. System integrity
  - D. System compatibility

22. A printer port is a female connector, or port, on the back of a computer that allows it to interact with a printer. Which of the following is **NOT** a printer port?
- A. Parallel port
  - B. SCSI port
  - C. USB port
  - D. Serial port
23. Which of the following products will remove grease and grime from a variety of surfaces without the need for vigorous scrubbing and without leaving any residue behind?
- A. All-purpose cleaner
  - B. Distilled water
  - C. Silicone spray
  - D. Denatured alcohol
24. Which one of the following is the most commonly used pointing device on a laptop?
- A. Serial mouse
  - B. PS/2 mouse
  - C. USB mouse
  - D. Touchpad
25. Which of the following network cable types is **MOST** often used in environments where physical security of the data is the top priority?
- A. UTP
  - B. Coaxial
  - C. Fiber optic
  - D. STP
26. Which one of the following troubleshooting tool performs software tests during start-up?
- A. BIOS
  - B. CMOS
  - C. CPU
  - D. VDU
27. The contrast ratio for a LCD monitor is **BEST** defined as the ratio between:
- A. display resolution and brightness
  - B. power consumption and output intensity
  - C. power savings of a comparable CRT monitor and the LCD
  - D. the darkest and lightest displayed output
28. Mutonyi's desktop computer won't turn on. Advise him on the first thing that he should do?
- A. Disconnect and reconnect the monitor
  - B. Disconnect and reconnect the CPU
  - C. Change RAM
  - D. Make sure both monitor and CPU are connected and receiving power.
29. Software \_\_\_\_\_ is the process of scanning, identifying, diagnosing and resolving problems, errors and bugs in software.
- A. development
  - B. troubleshooting
  - C. maintenance
  - D. installation
30. Which one of the following is a hardware tool that can be used to diagnose and solve network issues?
- A. Multimeter
  - B. Plier
  - C. Wire Crimper
  - D. Screwdriver



31. \_\_\_\_\_ is a method of converting data from a readable format to an unreadable encoded format.
- A. Data encryption
  - B. Data masking
  - C. Data integrity
  - D. Data security
32. Select from the list below one which is NOT a suitable reason for upgrading computer hardware.
- A. Enhanced security
  - B. More prominent productivity
  - C. Managing electronic waste
  - D. Improved experience for workers
33. The process of verifying whether someone is who it is declared to be is known as?
- A. Authorisation
  - B. Availability
  - C. Non-repudiation
  - D. Authentication
34. Which one of the following **BEST** describes the term data confidentiality?
- A. It refers to protection of data from unauthorised access and disclosure.
  - B. It refers to encryption technology that encrypts data on a hard disk drive.
  - C. It is the process of protecting corporate data and preventing data loss through unauthorized access.
  - D. It is about protecting data against improper maintenance, modification, or alteration.
35. The \_\_\_\_\_ is a 25-pin computer interface commonly used to connect printers to the computer.
- A. serial port
  - B. parallel port
  - C. USB port
  - D. VGA port
36. Which one of the following BEST describes the function of a serial port?
- A. Allows a personal computer (PC) to transmit or receive data one bit at a time.
  - B. Allows a personal computer (PC) to transmit or receive data down multiple bundled cables to a peripheral device such as a printer.
  - C. Provides the exchange of data, and also to power or charge the devices connected.
  - D. Connects to a network and high-speed Internet.
37. Identify the best reason for updating computer hardware;
- A. To enable the corresponding devices to operate proficiently as well as to fix the bugs for better security
  - B. This is incorporated into the system to communicate with the outside and / or provide new functions.
  - C. To perform calculations and to carry out other computer operations.
  - D. To perform arithmetic and logic operations
38. Often times a simple hardware upgrade can remedy a sluggishly performing workstation or desktop. Which of the following is a suitable reason for upgrading a computer's motherboard?
- A. To increase data transfer speed.
  - B. To increase staff productivity
  - C. To train staff on the latest technology
  - D. To minimise power consumption
39. \_\_\_\_\_ helps protect important confidential information from being publicly disclosed.
- A. Hard drive wiping
  - B. Social Engineering
  - C. Classification
  - D. RAS server

40. A technician just finished installing a new printer on Bauni's computer. Select the procedure Bauni can use to enable him see the test page option for the printer.
- A. Right-click on the printer and select Properties
  - B. Double click on the printer icon
  - C. Right-click on the printer and select Set as Default
  - D. Right-click on the printer and select Open
41. The following methods are used by companies to manage e-waste **EXCEPT**?
- A. Repair and Upgrade
  - B. Recruiting skilled technicians
  - C. Donate
  - D. Recycle
42. Which of the following statements best describes data masking?
- A. protection of data from, and about, individuals and organisations; and how we ensure that data is not made available or disclosed without authorisation.
  - B. A technique that scrambles data to create a false copy for various non-production purposes.
  - C. protective digital privacy measures that are applied to prevent unauthorized access to computers, databases and websites.
  - D. The process or act of confirming that a user who is attempting to log in to a database is authorized to do so.
43. Restricted data is \_\_\_\_\_.
- A. Data that is highly confidential in nature, carries significant risk from unauthorized access, or uninterrupted accessibility.
  - B. Made available to the public by the data steward and may be freely disseminated without potential harm.
  - C. Personal identifiable information that do not allow anyone to obtain it without permission
  - D. Information that is not openly shared with the general public but is not specifically required to be protected.
44. What are two proper care rules for the mouse?
- A. Handle gently and use on flat surface
  - B. Clean it in clean water and use it on a mouse pad
  - C. Handle it gently and wipe dust using soapy water
  - D. Eat snacks and drink beverages
45. System integration brings different programs together to function smoothly without interfering with each other or demanding identical actions from the users. Select from the list below a disadvantage of system integration.
- A. Accessibility, accuracy and coordination
  - B. Efficiency and productivity
  - C. Availability of new performance insights
  - D. Complex upgrading.
46. Gilo is a technician in Diong Academy. He has received several support requests from school caterer's PC located in the school cafeteria kitchen. The technician has reseated the PCI cards and replaced the hard drive in the PC. He has observed that PCs located in the Principal's office and Staffroom have not had this issue. Which of the following is **MOST** likely causing this PC's issue?
- A. Faulty RAM
  - B. 240 volt Kitchen outlets
  - C. Power Brownouts
  - D. Excessive Heat
47. Which one of the following is **NOT** a common health problem which can be associated with using a computer?
- A. Injuries to wrists caused by prolonged typing
  - B. Eye strain caused by screen glare
  - C. Flat foot pain
  - D. Back problems associated with poor seating or bad posture

48. What is the **FIRST** thing to do when identifying and troubleshooting a problem?
- A. Question the user and identify any user changes to the computer.
  - B. Establish a theory of probable cause.
  - C. Establish a plan of action to resolve the problem and implement the solution.
  - D. Test the theory to determine cause.
49. \_\_\_\_\_ is an umbrella term that describes the use of technology and science to reduce human impacts on the natural environment.
- A. Clean Technology
  - B. Information Technology Architecture
  - C. Green Information Technology
  - D. Geospatial Technology
50. Which one of the following is a proper care rule for the monitor?
- A. Clean it with enough water.
  - B. Don't spray with chemicals.
  - C. Avoid connecting direct power.
- .....



**DIPLOMA DATA MANAGEMENT AND ANALYTICS**

**DIPLOMA LEVEL I**

**INFORMATION SYSTEMS SUPPORT AND INTEGRATION**

**TIME: 3HRS**

**INSTRUCTIONS:** ANSWER ALL QUESTIONS. MARKS ALLOCATED TO EACH QUESTION ARE SHOWN

**QUESTION 1**

Which one of the following is a module that contains several random access memory (RAM) chips on a small circuit board with pins that connect to the computer motherboard.

- A. DIMM
- B. SIMM**
- C. SDRAM
- D. DDRAM

**QUESTION 2**

A client called customer care and reported her computer doesn't display images. Which one among the following is LEAST likely to be the cause of the problem?

- A. Defective RAM (bank zero)
- B. Crashed hard drive**
- C. Defective microprocessor
- D. Loose video card

**QUESTION 3**

Miss Zawadi was installing a new harddrive and saw the following message "invalid media device". Suggest a suitable solution to solve the problem.

- A. Format hard disk**
- B. Run fdisk
- C. Partition hardisk
- D. Install another operating system

**QUESTION 4**

Identify the statement that best describes Central Processing Unit (CPU).

- A. The device that sends the monitor signals telling it what to display
- B. The area that regulates all of the system power usage
- C. The area where all the of the Basic input/output routines are stored
- D. The area where all of the processing takes place**

**QUESTION 5**

Which one of the following uses anti-static strap to make sure a technician doesn't become the least path of resistance to the ground?

- A. Capacitor
- B. Resistor**
- C. Diode
- D. Transistor

### QUESTION 6

Harddrive is a non-volatile storage device. Which of the following is a type of computer hard drive?

- a) **Floppy disk drive (FDD)**
- b) Integrated drive electronics (IDE)
- c) Small computer system interface (SCSI)
- d) Enhanced Integrated Drive Electronics (EIDE)

### QUESTION 7

The type of connector is used to plug a telephone line into a modem is known as \_\_\_\_\_

- a) COM1
- b) **RJ-11**
- c) RJ-45
- d) RJ-10

### QUESTION 8

Power connectors p8 and p9 can be plugged into the system board. Which of the following statements is true?

- A. The black wires of both connectors should NOT be next to each other
- B. P8 and P9 don't plug into the system board
- C. **The black wires of both connectors should be next to each other**
- D. It doesn't matter which way you plug them in, the voltages are the same

### QUESTION 9

Which of the following interrupt is reserved for floppy drive controller

- A. IRQ 1
- B. IRQ 4
- C. IRQ 5
- D. **IRQ 6**

### QUESTION 10

Random access memory (RAM) is a high-speed component in devices that temporarily stores all information a device needs for the present and future. Which one among the following is NOT a type of RAM?

- A. Single Inline Memory Module (SIMM)
- B. Dual Inline Memory Module (DIMM)
- C. **Read Only Memory (ROM)**
- D. Single inline pin package (SIPP)

### QUESTION 11

Which of the following statement best describes the term Bandwidth?

- A. The speed at which data can be transferred from the server to the client.
- B. **A measurement of how much information can be carried in a given period (usually a second) over a wired or wireless communications link.**
- C. A unit of information or computer storage is equal to one billion bytes.
- D. None of the above.

### QUESTION 12

\_\_\_\_\_ is a type of port that communicates information to a peripheral device one bit at a time.

- A. **Serial port**
- B. Parallel port
- C. Optical port
- D. USB port

### QUESTION 13

Identify the statement which BEST describes modem:

- A. **A device that allows you to connect your PC to an internet service.**
- B. A piece of computer software that is used to browse the web. (e.g., Internet Explorer)
- C. An interconnected group of computers.

- D. A program that prevents other people on the Internet from accessing your computer and your files.

#### QUESTION 14

\_\_\_\_\_ would help a technician set a multimeter to detect an AC ripple.

- A. **AC Voltage**
- B. DC Voltage
- C. Standard Voltage
- D. Watt

#### QUESTION 15

Combinations of keys can be entered one key at a time rather than by pressing two or more keys simultaneously.

This feature is most likely to BENEFIT one who:

- A. lacks confidence when using a keyboard.
- B. **is only able to use one hand when entering data with a keyboard.**
- C. needs to use the mouse rather than the keyboard for all tasks.
- D. uses an oversized keyboard because of a visual impairment

#### QUESTION 16

Which one of the following components interface directly with the motherboard Southbridge chipset?

- A. Video card
- B. RAM
- C. **Harddrive**
- D. PCI slot

#### QUESTION 17

Which type of memory retains data bits in its memory as long as power is being supplied?

- A. RAM
- B. **SRAM**
- C. DRAM
- D. ROM

#### QUESTION 18

Mr. Pepswa a long a human resource specialist is seeking an advice on how to get additional storage space on his older computer.

Which one of the following should he look for in order to add additional storage space to his old computer?

- A. Adequate Random-Access Memory.
- B. The version of Basic Input and Output system.
- C. The type of the hard drive.
- D. **The available PATA/SATA connection.**

#### QUESTION 19

Communication between the CPU and other Components in the motherboard is controlled by \_\_\_\_\_.

- A. **Chipset**
- B. RAM
- C. ROM
- D. CMOS

#### QUESTION 20

Computer cases can easily be a hazard to technician. When opening a computer case, which one of the following is considered a good safety precaution?

- A. Remove the cover of the computer case before removing other parts.
- B. **Place tape over the case edges that are sharp**
- C. Remove the connections to the front panel before extending the case fully open.
- D. Ensure that any loose clothing such as a tie or shirt stay in constant contact with the case when handling internal components.

#### QUESTION 21

Electrostatic discharge (ESD) is a sudden and momentary flow of electric current between two electrically charged objects. Which one of the following scenarios increases the likelihood of ESD damage to a computer?

- A. Using a magnetic screwdriver while working on a hard drive
- B. Plugging a printer into an UPS
- C. Working in low levels of humidity**
- D. Self-grounding against the computer case

#### QUESTION 22

Identify a cleaning solution recommended to clean the contacts of computer and its peripherals.

- A. Glass cleaner with ammonia
- B. Water mixed with a small amount of dishwashing liquid
- C. Hydrogenated Peroxide
- D. Isopropyl alcohol**

#### QUESTION 23

Which is a BIOS security feature that ensures devices will only boot a trusted operating system?

- A. Secure boot**
- B. Secure drive
- C. Drive encryption
- D. RAID

#### QUESTION 24

What action should be taken to correct the situation where the configuration settings of the computer have been reset every time it is turned on?

- A. Replace the motherboard.
- B. Replace harddrive.
- C. Replace the CMOS battery.**
- D. Replace the power supply.

#### QUESTION 25

Ziocke computing solutions have done repairs to computers of their client. Identify the step in the troubleshooting process where they demonstrate to the client the way the solution corrected the problem.

- A. Verify full system functionality.
- B. Establish a plan of action to resolve the problem.
- C. Document the findings, actions, and outcomes.**
- D. Establish a theory of probable cause.

#### QUESTION 26

Which one of the following is used to ensure integrity of data?

- A. SSL
- B. MD5**
- C. TLS
- D. Checksum

#### QUESTION 27

Which security technique should be used to protect a computer against spyware?

- A. Two factor Authentication
- B. Antimalware**
- C. Intrusion detection system.
- D. Intrusion prevention system.

#### QUESTION 28

Which one of the following is NOT a responsibility of a help-desk technician?

- A. Manage Help Desk tickets in a timely manner.
- B. Provide customer assistance.
- C. Run diagnostics to resolve customer reported issues.
- D. Managing, Licensing and updating hardware and software assets.**

**QUESTION 29**

Identify a motherboard component that controls the system boot operation.

- A. **UEFI**
- B. Northbridge chip
- C. Southbridge chip
- D. CPU

**QUESTION 30**

Amount of data received by the CPU can be limited by which one of the following.

- A. Usage of CPU virtualization.
- B. The width of the front side bus
- C. The amount of RAM installed
- D. **The size of the CPU cache memory**

**QUESTION 31**

Access control is a method of restricting access to sensitive data. Which component of access control specifying access rights or privileges to resources.

- A. **Authorization**
- B. Authentication
- C. Access
- D. Audit

**QUESTION 32**

Which one of the components below is not housed inside a computer system unit?

- A. Motherboard.
- B. Hard Drive
- C. Power Supply
- D. **Mouse**

**QUESTION 33**

What is the device that provides additional memory and data for image and video viewing without limiting the available processing power required for other programs?

- A. Monitor
- B. Memory card
- C. **Video Card**
- D. RAM chip

**QUESTION 34**

Which one of the following is used to illustrate the role of compressed air in cleaning a computer?

- A. **Blowing out dust from inside and outside the computer.**
- B. Germs from your computer.
- C. Suck out the dust and other debris that can get inside of your computer.
- D. Wipe down any surface of your computer.

**QUESTION 35**

\_\_\_\_\_ is used to put all the data in sequence in order to make it easier for the hard drive to quickly access it leading to faster file startups.

- A. **Defragmentation tool**
- B. Compression tool
- C. Antivirus tool
- D. Disk space analysis tool

**QUESTION 36**

\_\_\_\_\_ is an electronic tool used to measure voltage, amps and resistance across circuits.

- A. **Multimeter**
- B. Voltmeter
- C. Ammeter
- D. Ohmmeter



### QUESTION 37

Which of the following is NOT included in a good standard operating procedure for maintenance?

- A. Directions for performing the job that are clear, concise and can be understood by a trained employee.
- B. Guidelines to follow after completing the work, including how to return to normal operation and what details need to be reported or recorded in files.
- C. **Details of the technician in charge of the maintenance operations and durations allowable for the various tasks.**
- D. A list of potential issues or problems that could occur and the normal troubleshooting steps and solutions to apply.

### QUESTION 38

What is the purpose of an anti-static wrist band?

- A. **To safely provide a way for static electricity to dissipate without causing electrostatic damage.**
- B. To clean a computer from dust and dirt inside the computer
- C. To wipe dampness in a computer
- D. To protect the technician from heat and injuries while working on the computer components.

### QUESTION 39

Cleaning the inside of a computer monitor is **NOT** advisable because \_\_\_\_\_?

- A. **It may retain a high voltage even when unplugged.**
- B. To avoid damaging the monitor electronics.
- C. It is too complicated for general repair.
- D. It is not meant for repair but to be discarded if defective.

### QUESTION 40

\_\_\_\_\_ to get rid of sticky keyboard keys.

- A. **Pop off the keys and clean the keyboard more thoroughly.**
- B. Use isopropyl to kill germs.
- C. use a small soft-bristled dusting brush.
- D. Throw away the defective keyboard.

### QUESTION 41

Which one of the following is **NOT** a method that can be used to identify and resolve computer hardware failure issues when using an operating system?

- A. Checking the hard drive
- B. Checking the memory
- C. Checking the power supply
- D. **Checking the processor**

### QUESTION 42

Suggest the most suitable reason why a computer could be running very slowly.

- A. The computer is growing older and becoming obsolete.
- B. **The hard drive is beginning to fail.**
- C. The computer has power problems
- D. The software is defective

### QUESTION 43

A suitable solution of dealing with a blank monitor would be?

- A. **Tighten the video cable.**
- B. Restart a computer.
- C. Clean the monitor.
- D. Throw away the monitor.

### QUESTION 44

Identify one way that you can upgrade a personal computer to improve its performance.

- A. **Upgrade graphics card**
- B. Upgrade keyboard
- C. Upgrade to a new printer
- D. Upgrade mouse

### QUESTION 45

Which of the following is **NOT** a suitable way of reducing electronic waste and its hazards to the environment?

- A. Sell old Electronics
- B. Learn to Repair Broken Electronics at Home
- C. Avoid using electronic equipment**
- D. Rent Electronic Equipment instead of Buying

**QUESTION 46**

\_\_\_\_\_ should be attached to you when working inside computers.

- A. Antistatic mat
- B. Antistatic wrist strap**
- C. Computer gloves
- D. Antiglare lenses

**QUESTION 47**

Which one of the following is used to connect harddrives, optical drives or other devices

- A. Molex**
- B. Berg keyed Connector
- C. 4-pin to 8-pin auxiliary power connector
- D. Advanced technology (AT)

**QUESTION 48**

\_\_\_\_\_ provides location to connect other components

- A. Central Processing Unit (CPU)
- B. BIOS Chip
- C. Expansion slot**
- D. Random Access Memory (RAM)

**QUESTION 49**

Which one among the following is an example of passive cooling?

- A. Land grid array
- B. Heat sink**
- C. Pin grid array
- D. Case fan

**QUESTION 50**

Error correction code can contain multiple bit errors

- A. True
- B. False**

**QUESTION 51**

\_\_\_\_\_ uses one cable to access high-speed and high-resolution media using one port with a cable

- A. High Definition Multimedia Interface (HDMI)
- B. Digital Visual Interface (DVI)
- C. Thunderbolt**
- D. Universal Serial Bus

**QUESTION 52**

A company is building a new secure data centre and wants to limit access by authorised personnel. What would be the best type of input device to use to limit access?

- A. Biometric device**
- B. Barcode scanner
- C. Magstripe reader
- D. Keyboard

**QUESTION 53**

\_\_\_\_\_ refers to specialized memory for servers and high-end workstations that use a large amount of random access memory (RAM).

- A. Unbuffered Memory
- B. Buffered Memory**
- C. Cache Memory

D. Dynamic Random Access Memory

**QUESTION 54**

When installing an hard disk drives (HDD) or Solid State Drive (SSD), the connectors should face the front of the case.

- A. **True**
- B. False

**QUESTION 55**

Modern Motherboard provide the IDE interface for internal storage devices

- A. True
- B. **False**

**QUESTION 56**

In installation where CPU cooling is important, hard disk drives (HDD) are preferred for storage.

- A. True
- B. **False**

**QUESTION 57**

Which one of the following is **NOT** an external storage factor?

- A. Port type
- B. Storage capacity
- C. Speed
- D. **Cost**

**QUESTION 58**

\_\_\_\_\_ performs a hardware check on the main components to check if the computer hardware is function properly.

- A. **POST**
- B. CMOS
- C. BIOS
- D. UEFI

**QUESTION 59**

Which type of access level ensures all screens and settings are available, EXCEPT the supervisor password setting.

- A. Limited Access
- B. **Full access**
- C. View Only Access
- D. No Access

**QUESTION 60**

\_\_\_\_\_ a security feature that reports device information and location to a monitoring centre.

- A. Legacy boot
- B. Flashing the BIOS
- C. Secureboot
- D. **LoJack**

**QUESTION 61**

Which of the following statements best describes the term overclocking?

- A. This is used by AMD to enhance the performance of their CPUs.
- B. **This sets your CPU to run at speeds higher than originally designed by the manufacturer\***
- C. This incorporates more than one CPU core into a single chip
- D. GPU fan.

**QUESTION A62**

\_\_\_\_\_ Refers to a place to view questions and answers to specific computer-related technical issues they have encountered.

- A. Notes
- B. Journal
- C. Online forums and Chats**
- D. History of Repairs

#### QUESTION 63

A technician wants to consult to find instructions for updating the BIOS on a computer. Identify the website he can use to gather the information.

- A. CPU manufacturer
- B. Operating system develop
- C. Case manufacturer
- D. Motherboard manufacturer**

#### QUESTION 64

Mr. Ochieng'a a technician accidentally spills a cleaning solution on the floor of the workshop. Where can he seek find instructions on how to properly clean up and dispose of the product?

- A. The regulations provided by the local occupational health and safety administration
- B. The insurance policy of the company
- C. The local hazardous materials team
- D. The safety data sheet**

#### QUESTION 65

Miss Rahma IT manager received a complaint that one of her technicians was rude and disrespectful to a client. Which action by the technician most **likely** caused the client to complain?

- A. The technician interrupted a number of times to ask questions**
- B. The technician ended the call without saying 'Have a nice day'
- C. The technician occasionally confirmed an understanding of the problem
- D. The customer was escalated to a level-two technician.

#### QUESTION 66

Mr. Wayne was explaining a problem he encountered on his computer to a technician. The technician recognized the problem prior to my Wayne finishing the explanation. What should the technician do?

- A. Ask the customer to repeat the problem so that the technician can document it and verify all the facts.
- B. Start working on the PC while listening to the customer at the same time.
- C. Wait politely for the customer to finish explaining the problem**
- D. Interrupt the customer and let the customer know that the technician knows what the problem is.

#### QUESTION 67

Repetitive Strain Injury (RSI) is one of health problems that one can suffer due to the use information communication technology (ICT) devices incorrectly or for too long. Select a suitable way used to prevent it.

- A. Use a wrist rest.**
- B. Sit upright against the back rest.
- C. Tilt the computer screen so it is set just below your eye level.
- D. Keep your feet flat on the floor.

#### QUESTION 68

Identify a possible cause of eye strain and headaches among the users;

- A. Using a mouse for long periods.
- B. Working in a cramped workspace
- C. Dirt on the screen.**
- D. Not sitting upright in your chair.

#### QUESTION 69

Suggest a safety measure taken to prevent the **risk of the electrocution**.

- A. **Keep drinks away from equipment.**
- B. Hide wires in cable ducts.
- C. Tuck trailing wires under desks or carpets.
- D. Don't plug too many devices into the same outlet.

#### QUESTION 70

A \_\_\_\_\_ tool which helps to attach the media connectors to end of the cables.

- A. **Crimper**
- B. Cable tester
- C. Cable certifier
- D. Punch down

#### QUESTION 71

Which one of the following is NOT a suitable method of purging junk files and programs?

- A. Run disk clean up software
- B. Empty the recycle bin
- C. Remove cache of offline web pages
- D. **Make a backup copy of files**

#### QUESTION 72

One of the common levels of data classification that are often found in an organization's data classification policy is internal data. Choose the best statement that describes internal data.

- A. Data that is open to the all.
- B. Data that is restricted to smaller teams within an organization.
- C. **Data that is considered only within an organization.**
- D. Data that is most sensitive in an organization and poses the largest risk if disclosed.

#### QUESTION 73

\_\_\_\_\_ is broadly defined as the process of organizing data by relevant categories so that it may be used and protected more efficiently.

- A. Data security
- B. **Data classification**
- C. Data protection
- D. Data integrity

#### QUESTION 74

Data stored in an organization may have to be destroyed after a certain period of time. Which one of the following methods is best suited to destroy hard disks?

- A. By degaussing
- B. **By shredding it into tiny pieces**
- C. By destroying the decryption keys
- D. By throwing hard disk away.

#### QUESTION 75

\_\_\_\_\_ is the process of modifying sensitive data in such a way that it is of no or little value to unauthorized intruders while still being usable by software or authorized personnel.

- A. Data security
- B. Data masking**
- C. Data privacy
- D. Data integrity

#### QUESTION 76

Which one of the following is **NOT** a good indicator that a computer has Random Access Memory (RAM) problems?

- A. Diminishing Performance of your System
- B. Frequent Crashes
- C. Video Card is not loading**
- D. Computer not booting

#### QUESTION 77

Which one of the following is **NOT** a good indicator that an existing computer requires replacing?

- A. Computer is running slowly**
- B. Price of the components needed to be replaced is approaching the cost of a new computer
- C. Current computer is more than eight years old
- D. Compatible parts not available

#### QUESTION 78

Identify how a USB device receives its power.

- A. Through a power cable.
- B. Directly from the computer's power supply.
- C. From an external power supply.
- D. Through the USB cable.**

#### QUESTION 79

Among the statements below, which one is NOT true about motherboard?

- A. also called a system board
- B. has a CPU socket
- C. has slots for DIMMs
- D. Cannot work independently.**

#### QUESTION 80

\_\_\_\_\_ are secret words or numbers used for protection of devices.

- A. biometrics data
- B. backup
- C. passwords**
- D. private words

#### QUESTION 81

\_\_\_\_\_ is the practice and precautions taken to protect valuable information from unauthorized access, recording, disclosure or destruction.

- A. Network Security
- B. Information privacy
- C. Information Security**
- D. Physical security

#### QUESTION 82

ICT Guideline is a systematic approach of controls to policies required to be formulated for ensuring usage of information and ICT systems. Changing password as a policy after a definite period of time improves \_\_\_\_\_ of the network.

- A. Performance
- B. Reliability
- C. Security**
- D. Consistency

#### QUESTION 83

A human resource manager opened his PC and the boot process stopped giving the following error message: "Non-System disk or disk error ... Replace and press any key when ready". What could be the MOST cause of the error.

- A. A non-bootable CD/DVD Drive.**
- B. The ROM has failed and you should replace it
- C. RAM has failed and you should replace it
- D. A key on the keyboard is stuck and the keyboard should be replaced

#### QUESTION 84

Which statement BEST describes the significance of a "beep" during the boot process of a PC?

- A. The number of beeps describe the quality of the processor
- B. The number of beeps describe the speed of the RAM Chips
- C. The number of beeps describe the overall condition of the PC's hardware**
- D. You can tell how powerful the PC is by the loudness or intensity of the beeps

#### QUESTION 85

Troubleshooting often involves the process of elimination, where a technician will follow a set of steps to determine the problem or resolve the problem.

- A. TRUE**
- B. FALSE

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#### QUESTION 85

Identify the type of system board that is suitable for processor upgrading to ensure maximum performance and future compatibility.

- A. ML
- B. PCI**
- C. ISA
- D. EISA

#### QUESTION 86

.\_\_\_\_\_ refers to "red book", "yellow book", and "orange book".

- A. SCSI
- B. IDE
- C. floppy drive technology
- D. CD-ROM standards**

#### QUESTION 87

What would the next probable step when configuring a hard drive after formatting.

- A. Format DOS partition**

- B. Install operating system
- C. Configure DMA channel and back-up interrupt
- D. Partition hard disk

#### QUESTION 88

A tool is used to test serial and parallel ports is known as \_\_\_\_\_?

- A. high volt probe
- B. cable scanner
- C. loop backs**
- D. sniffer

#### QUESTION 90

\_\_\_\_\_ is the highest binary number that can be referred on a three-position jumper block

- A. 4
- B. 6
- C. 3
- D. 1**

#### QUESTION 91

A technician received the following numeric error code check "A 17xx". This shows a problem with \_\_\_\_\_

- A. CMOS
- B. ROM BIOS
- C. DMA controller
- D. Hard drive or controller**

#### QUESTION 92

Which one of the hard drives provides the fastest access to huge video files?

- A. SATA
- B. IDE hard drives
- C. SCSI hard drives**
- D. EIDE hard drives

#### QUESTION 93

A female connector on your computer with a 25 pin will be typically be:

- A. Serial port
- B. parallel port**
- C. Docking
- D. COM port

#### QUESTION 94

Which of the following statements describes memory test during boot-up:

- A. Is a superfluous step that should be ignored
- B. Checks and verifies that contiguous memory is installed**



- C. Is an operational error
- D. Displays what memory is installed, but nothing else

#### QUESTION 95

Incorrect CMOS settings cannot be cause a disk error

- A. True
- B. False**

#### QUESTION 96

A customer has made a call to the helpdesk complaining her system that periodically locks up. After interrogation with the helpdesk team they realise the problem is not a software but hardware issue. Based on the scenario above what should the helpdesk team advise the customer to do to avert the problem?

- A. Rotate the RAM
- B. Replace the CPU
- C. Replace the level 2 cache SIMM
- D. Disable the CPU cache in CMOS**

#### QUESTION 97

\_\_\_\_\_ is regarded as the best way to protect hard drive data.

- A. Regular backups**
- B. Defragmentation
- C. Run chkdsk
- D. Run a regular diagnostic

#### QUESTION 98

Which of the following devices is used to prevent damage to electronic equipment from voltage "spikes" called transients.

- A. Surge suppressor**
- B. Spike protector
- C. UPS system
- D. High-grade multi-meter

#### QUESTION 99

A technician good Interpersonal competency may have little impact on the working relationship with customers.

- A. TRUE
- B. FALSE**

#### QUESTION 100

When troubleshooting a computer, which one of the following is considered to be a logical first step?

- A. Check the computer CMOS
- B. Identify the TCP/IP stack
- C. Define the circumstances of the problem**
- D. Define what applications are being used