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 software is an example of an operating system?
        A.   Microsoft Word
        B.   Microsoft Excel
        C.   Microsoft Windows
        D.   Microsoft Access   (2 marks)

2.   Which one of the following storage technologies overlaps data tracks on the hard disk to enhance its storage capacity?
        A.   Overlay magnetic recording
        B.   Shingled magnetic recording
        C.   Microwave assisted recording
        D.   Heat assisted magnetic recording   (2 marks)

3.   Which one of the following terms is **NOT** a characteristic of a sophisticated intelligent agent?
        A.   Adaptability
        B.   Autonomy
        C.   Interactive
        D.   Dependent   (2 marks)

4.   Which one of the following gates is commonly used for parity checking and generation?
        A.   AND
        B.   OR
        C.   XOR
        D.   NAND   (2 marks)

5.   Pick the **ODD** one out from the computer choices given below.
        A.   Mainframe computer
        B.   Minicomputer computer
        C.   Microcomputer
        D.   Palmtop computers   (2 marks)

6. Which one of the following groups consists of input devices **ONLY**?
   A. Keyboard, monitor, mouse
   B. Printer, mouse, printers
   C. Trackball, keyboard, scanner
   D. Mouse, keyboard, printer (2 marks)

7. A formula that is always true, regardless of the truth values of its components is referred to as _____.
   A. tautology
   B. truth table
   C. maxterm
   D. universal (2 marks)

8. Which one of the following parts of the central processing unit is used for arithmetic, calculation and comparison?
   A. ALU
   B. Registers
   C. Control Unit
   D. System Unit (2 marks)

9. Computers are classified according to the following criteria, **EXCEPT** _____?
   A. Purpose
   B. Weight
   C. Functionality
   D. Physical size (2 marks)

10. Convert the binary number $(1101)_2$ into a decimal number.
    A. D
    B. 11
    C. 13
    D. 15 (2 marks)

11. Converting the decimal number 255 to hexadecimal yields _____.
    A. 17
    B. FF
    C. 11111110
    D. 15 remainder 13 (2 marks)

12. Which one of the following statements **BEST** describes the advantage of Liquid Crystal Display (LCD) compared to other screens?
    A. Bulky and heavy
    B. Lightweight and energy-efficient
    C. Offers better colour accuracy and brightness
    D. Offers superior contrast, colour vibrancy and viewing angles (2 marks)

13. Which one of the following statements **BEST** describes the role of the chief technology officer in an organisation?
A. Overseeing and managing the information system's department and strategy, budget and security
B. Filtering new ideas and technologies and identifying those that are most relevant to the organisation
C. Managing security for all the organisation's assets, physical equipment and intellectual property
D. Responsible for managing and maintaining computer systems and troubleshooting technical issues
(2 marks)

14. Identify the computer generation in which transistors technology was used _____.
A. first generation
B. third generation
C. fifth generation
D. second Generation
(2 marks)

15. The following are common computer - monitor connectivity options, **EXCEPT** _____.
A. Universal Serial Bus (USB)
B. Video Graphics Array (VGA)
C. Digital Visual Interface (DVI)
D. High-Definition Multimedia Interface (HDMI)
(2 marks)

16. The following are function of a processor, **EXCEPT** _____.
A. fetch instructions from memory, decode, and execute them
B. performs mathematical calculations and logical operations
C. direct and coordinate operations of computer components
D. displays visual information generated by a computer
(2 marks)

17. Which one of the following features **BEST** describes a desktop environment?
A. Office working area
B. Secretary's office desk top with in tray, out tray and pen holder
C. Personal computer designed for regular use at a single location, as opposed to portable computers like laptops or tablets
D. The graphical user interface (GUI) provided by an operating system, where users can interact with applications and files
(2 marks)

18. The following are examples of closed source software, **EXCEPT** _____.
A. Apple iOS
B. WordPress
C. Microsoft Office
D. Adobe Acrobat
(2 marks)

19. Which one of the following network hardware equipment can operate without internet connection?
A. Router
B. Switch
C. Modem
D. Firewall
(2 marks)

20.   Which one of the following characteristics is a feature of assembly language?
        A.   Machine independent
        B.   Requires an interpreter
        C.   Uses mnemonic codes
        D.   Easier to understand   (2 marks)

21.   Which one of the following challenges **LEAST** applies to cloud computing?
        A.   Cloud services run on a worldwide network of data centers
        B.   Dependence on internet connection and potential downtimes
        C.   Storing sensitive data in the cloud may raise privacy concerns
        D.   Customers may have less control over infrastructure in public cloud settings   (2 marks)

22.   Which one of the following characteristics applies to a normalised database?
        A.   Redundant data is minimised
        B.   Data is stored in a single table
        C.   Protection of data from loss
        D.   Sequential storage of all data   (2 marks)

23.   Which one of the following software is **NOT** an example of utility program?
        A.   WinRAR
        B.   Unix
        C.   Microsoft defender
        D.   McAfee   (2 marks)

24.   Computer software is classified according to different approaches. The choices provided below are classifications
        of computer software according to acquisition, **EXCEPT** _____.
        A.   in-house developed
        B.   standard software
        C.   service programs
        D.   open source   (2 marks)

25.   Which one of the following statements is **NOT** an advantage of firewall?
        A.   Introduce latency as they inspect and filter traffic
        B.   Prevents unauthorised users from accessing private networks
        C.   Log traffic patterns and alert administrators to suspicious activity
        D.   Block malware, denial-of-service (DoS) attacks and other types of malicious traffic   (2 marks)

26.   Which one of the following is **NOT** a device under the control of an operating system?
        A.   Processor
        B.   Main memory
        C.   Power supply unit
        D.   Communication devices   (2 marks)

27. Which one of the following types of internet connection provided by internet service providers has consistent speed regardless of distance from the provider?
    A. Dial-up
    B. Satellite
    C. Fiber Optic
    D. Digital Subscriber Lines (2 marks)

28. Which one of the following choices **BEST** describes a deadlock in a computing environment?
    A. Allocating each job waiting for execution, processor time at each given interval
    B. Locking a computer by entering the wrong password
    C. Breaking from the normal sequential processing of instructions in a program
    D. Where one particular task holds a needed resource and refuses to release it for use by other tasks (2 marks)

29. Which one of the following operating systems classification criteria is the **ODD** one out?
    A. Number of users
    B. Data processed
    C. Interface
    D. Number of tasks (2 marks)

30. The process of starting a computer and loading the operating system into memory as well as initialising hardware and software components is called _____.
    A. booting
    B. loading
    C. installing
    D. configuring (2 marks)

31. The software that is free to try but requires payment for continued use and for full features is called _____.
    A. freeware
    B. shareware
    C. proprietary software
    D. open source software (2 marks)

32. Google drive and Microsoft Azure can be classified under _____.
    A. DevOps
    B. Cloud computing
    C. Artificial Intelligence
    D. Mobile Applications (2 marks)

33. Which one of the following characteristics is **NOT** a key feature of Windows Operating System?
    A. Uses Windows Explorer to allow users to manage files and folders easily
    B. Users can view and audit the source code, promoting trust and transparency
    C. Runs multiple applications simultaneously, with task switching and virtual desktops
    D. Offers a graphical interface with icons, windows and menus, making navigation intuitive (2 marks)

34. Which one of the following characteristics belongs to high-level languages?
   A. Hardware oriented
   B. Frequently uses a symbolic address
   C. Uses mnemonic
   D. Programs are portable (2 marks)

35. A program that translates code line by line allowing the Central Processing Unit (CPU) to execute one line before translating the next is known as _____.
   A. interpreter
   B. assembler
   C. compiler
   D. translator (2 marks)

36. Below are the contents of program development life cycle.
   (i) Development
   (ii) Design
   (iii) Planning
   (iv) Testing
   (v) Maintenance
   (vi) Analysis
   (vii) Implementation

   Arrange the above according to the way they follow each other in the program development lifecycle.

   A. (i), (ii), (iii), (iv), (v), (vi), (vii)
   B. (iii), (vi), (ii), (iv), (v), (i), (vii)
   C. (iii), (vi), (ii), (i), (iv), (vii), (v)
   D. (vi), (iii), (ii), (i), (vii), (iv), (v) (2 marks)

37. Which one of the following choices **BEST** describes the reason for using test data as a method of error detection?
   A. Involves going through the program on paper before entering it in the program editor
   B. Where a programmer can run debugging utilities during translation to detect syntax errors
   C. Using test data on paper
   D. Carrying out a trial run on the new program, in which case at each run he enters different data variations (2 marks)

38. Which one of the following statements **BEST** describes an advanced persistent threat?
   A. A technique for obtaining unauthorised data by using email, where the phisher pretends to be a legitimate company
   B. An attacker providing malicious input, which is then processed by an interpreter, leading to unauthorised actions
   C. An attacker secretly intercepting and altering communication between two parties, often to steal information
   D. A sophisticated, possibly long running computer hack perpetrated by large well-funded organisations (2 marks)

39. The percentage of people who visit a website and leave after viewing one page is referred to as _____.
   A. charge rate
   B. discard rate
   C. bounce rate
   D. abandonment (2 marks)

40. Which one of the following characteristics is **NOT** a key feature of blockchain technology?
   A. Consensus
   B. Peer to peer
   C. Immutability
   D. Centralisation (2 marks)

41. In big data management, velocity refers to_____.
   A. the speed in which new data is generated and processed
   B. the amount of data being stored, processed and analysed
   C. the quality, truthfulness, accuracy and reliability of data
   D. the different types of data generated across business units (2 marks)

42. Which one of the following types of mouse uses radio frequency (RF) or bluetooth technology to connect to the computer?
   A. Virtual mouse
   B. Optical Mouse
   C. Wireless mouse
   D. Trackball mouse (2 marks)

43. A user account is assigned to an individual to access a system. The following are user accounts in Windows, **EXCEPT** _____.
   A. Standard account
   B. Personal account
   C. Guest account
   D. Administrator account (2 marks)

44. The following are a components of the central processing unit, **EXCEPT** _____.
   A. ALU
   B. Control Unit
   C. Main memory
   D. Power Supply Unit (2 marks)

45. Identify the type of network topology diagram shown below:
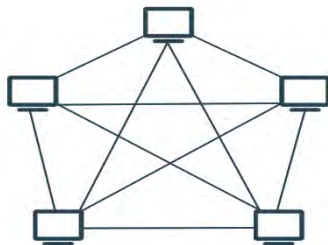
   A. Tree topology
   B. Star topology
   C. Mesh topology
   D. Ring topology (2 marks)

46. The following are types of computer networks, **EXCEPT** _____.
    A.   ZAN
    B.   PAN
    C.   MAN
    D.   WAN   (2 marks)

47. Power management, virtualisation and e-waste management are associated with _____.
    A.   green computing
    B.   edge computing
    C.   fog computing
    D.   grid computing   (2 marks)

48. Which one of the following attacks is **NOT** a threat to information stored in a computer?
    A.   Data breaches
    B.   Software update
    C.   Malware
    D.   Insider threats   (2 marks)

49. In a database table, StudentId, StudentName and Email address are referred to as _____.
    A.   entities
    B.   columns
    C.   relations
    D.   attributes   (2 marks)

50. Which one of the following features can be used for revolutionising content creation to enhance creativity?
    A.   Narrow artificial intelligence
    B.   Artificial general intelligence
    C.   Generative artificial intelligence
    D.   Deep neural network ecosystem   (2 marks)

....

DIPLOMA IN DATA MANAGEMENT AND ANALYTICS (DDMA)

DIPLOMA IN COMPUTER NETWORKS AND SYSTEMS ADMINISTRATION (DCNSA)

LEVEL I

INTRODUCTION TO COMPUTING SYSTEMS

MONDAY: 19 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 **BEST** describes computer hardware?
      A.   Circuit board or chip, installed on a computer
      B.   The mechanical and electronic components of a computer
      C.   Set of instructions that instruct a computer how to carry out specific task
      D.   Component that connects a computer to a computer network   (2 marks)

2.   Which one of the following technologies connects computers in a large geographical area?
      A.   Metropolitan network
      B.   Wide area network
      C.   Campus area network
      D.   Local area network   (2 marks)

3.   Which one of the following refers to the location of a unit of data in a memory array?
      A.   Assembly
      B.   Address
      C.   Interface
      D.   Interrupt   (2 marks)

4.   A byte that is split into two 4-bit units is referred to as_____.
      A.   nibble
      B.   diodes
      C.   buses
      D.   binary   (2 marks)

5.   Which one of the following is a feature of high level language programming language?
      A.   Its source code uses mnemonics
      B.   Its source code is written in binary
      C.   It is characterised by the shortest coding time
      D.   It is characterised by the longest execution time   (2 marks)

6.   An operating system for real-time computing applications that processes data and events with critically defined time constraints is known as_____.
      A.   mobile operating system
      B.   desktop operating system
      C.   network operating system
      D.   real-time operating system   (2 marks)

7. Which one of the following refers to a facility that houses cloud storage systems?
   A. Data center
   B. SaaS model
   C. Public cloud
   D. On-premise   (2 marks)

8. Which one of the following security mechanisms will require a computer user to provide a name and password in order to access a document?
   A. Authorisation
   B. Authentication
   C. Endorsement
   D. Encryption   (2 marks)

9. Which one of the following happens after the Power on Self-Test (POST) routine is successfully completed during the boot process?
   A. The boot loader is executed
   B. The operating system is loaded
   C. The CMOS settings are configured
   D. The hardware components are initialised   (2 marks)

10. Which one of the following identifies an object in a website by its location and the protocol needed to access it?
    A. Hypertext markup language
    B. Uniform resource locator
    C. Domain name system
    D. Dynamic host protocol   (2 marks)

11. What should you check for before closing a shared document that others might be editing?
    A. That the document is printed
    B. That the document is minimised
    C. That the document is saved locally
    D. That changes are synchronised and saved to the shared location   (2 marks)

12. Which one of the following is a type of network that protects its users by encrypting their data and masking their IP addresses?
    A. Cloud network
    B. Virtual private network
    C. Domain network
    D. Local area network   (2 marks)

13. Which one of the following is a primary consideration when generating a QR code for digital inventory management?
    A. The size of the QR code
    B. The resolution of the QR code
    C. The content encoded in the QR code
    D. The color scheme of the QR code   (2 marks)

14. Which one of the following **BEST** describes an electrostatic plotter?
    A. Paper lies partially flat on a table-like surface, and toner is used in a photocopier-like manner
    B. The pen and marker moves in both horizontal and vertical directions to draw the image
    C. It uses one or more colored to draw intricate designs, such as maps on the paper
    D. It operates like an inkjet printer and uses inkjet technology but on a much larger scale   (2 marks)

15. A hardware unit with its own memory and processor, a screen and keyboard connected to a larger computer system is referred to as_____.
    A. graphics terminal
    B. intelligent terminal
    C. dumb terminal
    D. docking station   (2 marks)

16. Which one of the following is a common reason for upgrading a laptops' operating system?
    A.   To decrease storage space
    B.   To down grade system performance
    C.   To add new features and improve security
    D.   To increase the computers physical memory   (2 marks)

17. Which one of the following is **NOT** a function of an operating system?
    A.   Loads and runs application programs
    B.   Communication with peripheral devices
    C.   Schedules processes to run on CPU
    D.   It performs specific tasks for users   (2 marks)

18. Which one of the following network devices propagates an incoming signal to all the connected network devices?
    A.   Bridge
    B.   Ring
    C.   Switch
    D.   Gateway   (2 marks)

19. Which one of the following is **NOT** an example of personal data?
    A.   Identification number
    B.   Online identifier
    C.   Location data
    D.   System number   (2 marks)

20. Convert the decimal number 156 to hexadecimal.
    A.   98
    B.   9A
    C.   9B
    D.   9C   (2 marks)

21. Which one of the following factors does **NOT** directly impact the speed of mobile networks?
    A.   Physical barriers
    B.   Network traffic
    C.   Operating system
    D.   Signal strength   (2 marks)

22. Which one of the following is the binary equivalent of decimal number 25?
    A.   11010
    B.   11001
    C.   10111
    D.   10101

23. A collection of computers that share a common security policy is referred to as_____.
    A.   network domain
    B.   IP Security policy
    C.   patch management
    D.   endpoint systems   (2 marks)

24. What is the purpose of using folder permissions in computing?
    A.   To slow down file access
    B.   To increase the risk of data loss
    C.   To organise files into a hierarchical structure
    D.   To control who can access, modify or delete files within a folder   (2 marks)

25. Which one of the following is a type of operating system that allows users to manage and run several programs at the same time, allowing them to perform a variety of functions concurrently?
    A.   Multiuser
    B.   Multitasking
    C.   Real time
    D.   Timesharing   (2 marks)

26. Which one of the following logic gates can be represented by the truth table below?

Inputs		Output
A	B	T
1	1	1
1	0	1
0	1	1
0	0	0

   A.   OR
   B.   AND
   C.   NOR
   D.   NAND   (2 marks)

27. Select the main advantage of using a fiber optic for internet connection.
   A.   Low cost
   B.   Consist of glass
   C.   Easy installation
   D.   High speed and reliability   (2 marks)

28. Which one of the following refers to the use of external service providers to effectively deliver IT-enabled business processes?
   A.   Inshoring
   B.   Outsourcing
   C.   Insourcing
   D.   Offshoring   (2 marks)

29. What does the term "organic search results" refer to?
   A.   Paid advertisements on search engines
   B.   Results that are related to organic farming
   C.   Sponsored links at the top of search pages
   D.   Results that are naturally generated based on relevance   (2 marks)

30. What would be the main function of a firewall in a computer network?
   A.   To back up important files
   B.   To improve computer speed
   C.   To detect and remove viruses
   D.   To filter incoming and outgoing packets   (2 marks)

31. Which one of the following refers to an operating feature that finds and installs the device driver with minimal configuration?
   A.   Add/remove hardware
   B.   Manual installation
   C.   EOM driver configuration
   D.   Plug and play technology   (2 marks)

32. Peter suspects that a recent update is causing his operating system not to start properly. What should he do first to try and correct the error?
   A.   Replace the hard drive
   B.   Install a new graphics card
   C.   Change the computer's power settings
   D.   Boot into Safe Mode and uninstall the recent update   (2 marks)

33. Which one of the following software serves the needs of a specific industry?
   A.   Horizontal market application
   B.   Vertical market application
   C.   Commercial off-the-shelf
   D.   Custom developed software   (2 marks)

34. Which one of the following is **NOT** a function of a web browser?
   A. Linking multiple computers and devices together
   B. Displaying and printing Web contents on the internet or intranet
   C. Displaying, printing and saving a file on the internet or intranet
   D. Uploading scanned original data via a server on the internet or intranet   (2 marks)

35. Which one of the following is **NOT** a technique that can be used to protect data from cybercrime?
   A. Data encryption
   B. Use of antivirus software
   C. Backing up data
   D. Use of door locks   (2 marks)

36. Which one of the following is a type of internet service provider that provides high-speed internet access through cable, fiber-optic or digital subscriber line (DSL) connections?
   A. Dial-up ISP
   B. Broadband ISP
   C. Subscriber line (DSL)
   D. Non-Subscriber line (NDSL)   (2 marks)

37. With reference to internet safety, which one of the following is **NOT** a tip for creating strong passwords?
   A. Random passwords are the weakest
   B. Don't use the same password for each account
   C. Never use personal information
   D. Include numbers, symbols and both uppercase and lowercase letters   (2 marks)

38. Which one of the following is a user account that has access to limited computing resources?
   A. Standard user account
   B. Administrator account
   C. Guest account
   D. Restricted account   (2 marks)

39. Which one of the following is the result for the conversion of hexadecimal number AC7.D to octal?
   A. 5207.64
   B. 5307.64
   C. 3307.61
   D. 2304.34   (2 marks)

40. Personal computers use a number of chips mounted on a main circuit board. What is the common name for such boards?
   A. Daughterboard
   B. Motherboard
   C. Circuit board
   D. Board   (2 marks)

41. Which one of the following refers to the file format that can be used when there is need to save files that cannot be modified but still need to be easily shared and printed?
   A. .jpg
   B. .xls
   C. .pdf
   D. .docx   (2 marks)

42. An advantage of network software is that it enables network administrators is to_____.
   A. control access to data
   B. install antivirus programs
   C. add and remove computer hardware
   D. install Microsoft office program   (2 marks)

43. Which one of the following is an application of computers in the marketing field?
   A. Used for preparation of income statements
   B. Used for salary processing
   C. Used for human resource management
   D. Used for training customers   (2 marks)

44. Which one of the following files can be used as inputs to the master file?
    A. Transaction files
    B. Reference files
    C. Archive files
    D. Executable files   (2 marks)

45. Which one of the following may not result from a threat to data security?
    A. Complete data loss
    B. Data corruption
    C. Inability to access data
    D. Data scrubbing   (2 marks)

46. Information Technology refers to the use of_____.
    A. software and hardware for processing information
    B. software and hardware for distribution of useful information
    C. hardware and software for storage, retrieval, processing and distributing information of many kinds
    D. principles of physical science and social science for processing of information of many kinds   (2 marks)

47. Which one of the following will control input and output activities and manage other functions of communication network?
    A. Communication processor
    B. Communication software
    C. Terminal
    D. Protocol   (2 marks)

48. Which one of the following **BEST** describes the communication device that receives signals and re-transmits them at their original strength?
    A. Router
    B. Repeater
    C. Bridge
    D. Switch   (2 marks)

49. The activity of adding information to internet websites is referred to as_____.
    A. downloading
    B. upgrading
    C. uploading
    D. downgrading   (2 marks)

50. The commissioning of non-illegal acts through the use of a computer system is referred to as_____.
    A. computer crime
    B. computer abuse
    C. computer hacking
    D. computer corruption   (2 marks)

……………………………………………………………………………..

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 one of the following is the decimal equivalent of the hexadecimal number 1A7?
   A.   422
   B.   356
   C.   279
   D.   423   (2 marks)

2.   The process of starting a computer from a completely switched-off state is referred to as _____.
   A.   Warm booting
   B.   Hot booting
   C.   Cold booting
   D.   POST booting   (2 marks)

3.   Which one of the following terms refers to a section of memory or storage in which items are held temporarily until they are moved to an input device?
   A.   Spooler
   B.   Beamer
   C.   Buffer
   D.   Flash   (2 marks)

4.   Which one of the following is the hexadecimal equivalent of the octal number 357?
   A.   239
   B.   EF
   C.   FE
   D.   ED7   (2 marks)

5.   Which one of the following statements **BEST** describes a bridge as used in computer networks?
   A.   A device used to connect dissimilar networks
   B.   A device used to connect several local area networks using common protocols
   C.   A multiport repeater used to connect multiple wires
   D.   A device used to route packets between networks   (2 marks)

6.   Which one of the following disks is **NOT** an example of an optical disk?
   A.   Flash disk
   B.   Digital versatile
   C.   Compact disk
   D.   Blu-ray disk   (2 marks)

7. Consider the following:
    (i) Data
    (ii) Hardware
    (iii) Software
    (iv) Networks
    (v) User interface
    (vi) Business processes
    Which of the above components are categorised as IT infrastructure?
    A.   (i), (ii), (vi)
    B.   (ii), (iii), (iv)
    C.   (iii), (iv), (v)
    D.   (ii), (iii), (vi)   (2 marks)

8. Which one of the following statements **BEST** describes the term scalability as used in cloud computing?
    A.   The provisioning of resources to scale outward or inward to meet the demand
    B.   Appearing everywhere and anywhere, not limited to a particular location
    C.   The ability to access cloud-based services without going through a third party
    D.   The ability of a network to expand its capacity in response to workload changes   (2 marks)

9. Which one of the following character encoding schemes represents 128 characters?
    A.   UTF-8
    B.   ASCII
    C.   EBCDIC
    D.   UTF-16LE   (2 marks)

10. Which one of the following can be used to boost the performance of an operating system?
    A.   Disk cleanup
    B.   Wireless mouse
    C.   Network latency
    D.   Driver updates   (2 marks)

11. Which one of the following statements is **NOT** a consideration when choosing file names?
    A.   They should contain punctuation characters
    B.   They should be relevant to the contents of the file
    C.   They should be unique and named consistently
    D.   They should contain the correct file extensions   (2 marks)

12. The part of the Internet that is **NOT** accessible through standard search engines and is often used for illegal activities is referred to as:
    A.   Surface web
    B.   Dark web
    C.   Deep web
    D.   Tor web   (2 marks)

13. The process of verifying claims about holding specific identities is referred to as _____.
    A.   Automation
    B.   Authentication
    C.   Authorisation
    D.   Tokenisation   (2 marks)

14. Which one of the following can be used to facilitate online shopping by allowing customers to reserve items they plan to purchase?
    A.   Hardware cart
    B.   Shopping cart
    C.   Folding cart
    D.   Wheeled cart   (2 marks)

15. Which one of the following logic gates will give a **TRUE** output when either of the input is TRUE?
    A.   AND
    B.   OR
    C.   NOT
    D.   NAND   (2 marks)

16. What does borrowing a one in hexadecimal number system subtraction mean?
    A.   Borrowing a 10
    B.   Borrowing a 16
    C.   Borrowing a 2
    D.   Borrowing a 8   (2 marks)

17. Which one of the following can be referred to as universal logic gates?
    A.   AND and OR gates
    B.   NOT and NOR gates
    C.   NAND and NOR gates
    D.   XOR and XNOR gates   (2 marks)

18. What is the result when the binary number 1011011 is subtracted from 1110110?
    A.   101011
    B.   101101
    C.   011011
    D.   110111   (2 marks)

19. Consider the following cybersecurity threats:
    (i)   Floods
    (ii) Fire
    (iii) War
    (iv) Earthquakes
    (v)   Terrorism
    (vi) Theft
    Which threats can be categorised as natural threats?
    A.   (ii), (iii), (v)
    B.   (i), (ii), (iv)
    C.   (ii), (iv), (vi)
    D.   (i), (v), (vi)   (2 marks)

20. Which one of the following statements is **TRUE** about real time operating system?
    A.   Process scheduling can be done only once
    B.   All processes have the same priority
    C.   Kernel is not required
    D.   A task must be serviced by its deadline period   (2 marks)

21. _____is the oldest architecture used for developing an operating system.
    A.   Layered
    B.   Client server
    C.   Monolithic
    D.   Virtual memory   (2 marks)

22. Which one of the following is a characteristic of Random Access Memory (RAM)?
    A.   RAM is non volatile
    B.   RAM is volatile
    C.   RAM is permanent memory
    D.   RAM is readily available   (2 marks)

23. Personal computers use a number of chips mounted on a main circuit board. What is the common name for such boards?
    A.   Daughterboard
    B.   Motherboard
    C.   Circuit board
    D.   Board   (2 marks)

24. Which one of the following is the most powerful type of computer in terms of the processing speed?
    A.   Mainframe
    B.   Superconductor
    C.   Microcomputer
    D.   Supercomputer   (2 marks)

25. A computer device that is used to provide a hard copy output is referred to as:
    A.   Cathode Ray Tube (CRT)
    B.   Keyboard
    C.   Monitor
    D.   Printer   (2 marks)

26. The Windows application that enables computer users to view and organise files and folders is referred to as:
    A.   Folder explorer
    B.   File explorer
    C.   Document explorer
    D.   Data explorer   (2 marks)

27. Which one of the following statements is **NOT** a function of the operating system?
    A.   Loading computer programs into read only memory
    B.   Computer memory management
    C.   File systems management
    D.   Managing computer system processes   (2 marks)

28. Which one of the following terms refer to a user account that enables computer users to change any settings and to access all files?
    A.   Standard account
    B.   Administrator account
    C.   Guest account
    D.   Control account   (2 marks)

29. Which one of the following is **NOT** a feature of low-level programming languages?
    A.   Their source code uses mnemonic notation
    B.   They are translated by assembler programs
    C.   Their source code uses binary notation
    D.   They are machine dependent   (2 marks)

30. Which one of the following statements is **TRUE** about interpreter as a programming language translator?
    A.   It translates the high-level language source code in a statement by statement format
    B.   It translates the entire high-level language source code before providing a report
    C.   It translates the low-level language source code in a statement by statement format
    D.   It translates the entire low-level language source code before providing a report   (2 marks)

31. _____ is a software whose programming code is owned by the original developer but it is made available free to the general public, who is encouraged to experiment with the software, make improvements and share the improvements with the user community.
    A.   Freeware
    B.   Shareware
    C.   Open source
    D.   Closed source   (2 marks)

32. The type of network that links together mainframes, minicomputers and microcomputers that are in close proximity for the purpose of communication is referred to as:
    A.   Client-server network
    B.   Wide area network
    C.   Personal area network
    D.   Local area network   (2 marks)

33. Which one of the following is **NOT** a data communication system component?
    A.   Communication processor
    B.   Communication software
    C.   Terminal
    D.   Procedure   (2 marks)

34. A communication device that receives signals and re-transmits them at their original strength is called
_____.
   A. Router
   B. Repeater
   C. Bridge
   D. Switch   (2 marks)

35. Which one of the following topologies will involve the connecting a terminal to all the other terminals to avoid data redundancy?
   A. Star topology
   B. Mesh topology
   C. Ring topology
   D. Hybrid topology   (2 marks)

36. The activity of adding information to internet websites is referred to as:
   A. Downloading
   B. Upgrading
   C. Uploading
   D. Downgrading   (2 marks)

37. The internet service that enables people to use the Internet as the transmission medium for telephone calls is called?
   A. Telnet
   B. VOIP
   C. Chatting
   D. Usenet newsgroup   (2 marks)

38. Which one of the following terms refers to an administrative structure for organising, delivering and accessing services on the internet?
   A. Internet domain
   B. Internet server
   C. Internet browser
   D. Internet website   (2 marks)

39. Which one of the following form of text-based communication in which two persons participate in a single conversation over their computers?
   A. Internet communication
   B. Mobile communication
   C. Text communication
   D. Instant messaging   (2 marks)

40. The data security goal which protects information from being disclosed without authorisation is referred to as:
   A. Integrity
   B. Accessibility
   C. Conformity
   D. Confidentiality   (2 marks)

41. Which one of the following is an internet security threat where attackers send fraudulent messages or emails, often impersonating a trustworthy source, to trick the recipient into giving up sensitive information such as login credentials?
   A. Ransomware
   B. Malware
   C. Phishing
   D. Man in the middle   (2 marks)

42. Which one of the following may **NOT** result from a threat to data security?
   A. Complete data loss
   B. Data corruption
   C. Inability to access data
   D. Data upgrading   (2 marks)

43. Which one of the following refers to an encrypted connection over the internet from a device to a network that helps to prevent eavesdropping?
   A.   Personal area network
   B.   Virtual private network
   C.   Virtual area network
   D.   Encryption   (2 marks)

44. The commissioning of non-illegal acts through the use of a computer system is referred to as:
   A.   Computer crime
   B.   Computer abuse
   C.   Computer hacking
   D.   Computer corruption   (2 marks)

45. Which one of the following web browser features will allows computer users to input a Web address and visit a website?
   A.   Web address bar
   B.   Bookmarks
   C.   Web plugin
   D.   Home button   (2 marks)

46. Which one of the following is **NOT** a type of firewall used to protect a computer network?
   A.   Proxy firewall
   B.   Packet-filtering firewall
   C.   Stateful inspection firewall
   D.   Software firewall   (2 marks)

47. Which one of the following is **NOT** a feature of an email?
   A.   Automatic reply to messages
   B.   Auto-forward and redirection of messages
   C.   Facility to send copies of a message to many people
   D.   Lack of notification if a message cannot be delivered   (2 marks)

48. Which one of the following statements is a function of application software?
   A.   Performs a specific task for computer users
   B.   Includes programs designed to help programmers
   C.   It is used to control the operating system
   D.   It enables computer users to install computer hardware   (2 marks)

49. Which one of the following is **NOT** a factor to consider when selecting computer software for an organisational function?
   A.   Ease of upgrading
   B.   Vendor viability
   C.   Ease of implementation
   D.   Input method   (2 marks)

50. Which one of the following is an example of operating system?
   A.   Apache Spark
   B.   Window 10
   C.   Libre office
   D.   Ms Word   (2 marks)

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DIPLOMA IN DATA MANAGEMEMENT AND ANALYTICS (DDMA)

DIPLOMA IN COMPUTER NETWORKS AND SYSTEMS ADMINISTRATION (DCNSA)

LEVEL 1

INTRODUCTION TO COMPUTING SYSTEMS

MONDAY 4 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. What is the primary purpose of instant messaging (IM) in the context of communication?
    A. To send lengthy and formal business documents
    B. To facilitate real-time text-based communication
    C. To share multimedia content only
    D. To schedule meetings and appointments   (2 marks)

2. In the context of computer security, what term refers to a piece of software or a technique used to take advantage of a vulnerability in a computer system, application or network for malicious purposes?
    A. Firewall
    B. Antivirus
    C. Patch
    D. Exploit   (2 marks)

3. An extremely high-frequency radio communication beam that uses line-of-sight transmission between any two points is known as _____.
    A. Broadcast
    B. Microwave
    C. Satellite
    D. Infrared   (2 marks)

4. In software development and project management, what term describes the phenomenon where uncontrolled changes and additions to a project's requirements or features lead to project delays and increased costs?
    A. Refactoring
    B. Debugging
    C. Scope Creep
    D. Prototyping   (2 marks)

5. Which of the following terminologies refers to having the same data stored in multiple locations?
    A. Data franchising
    B. Data veracity
    C. Data redundancy
    D. Data isolation   (2 marks)

6. "Failure of any one circuit or workstation affects only one computer on that circuit." This statement is only **TRUE** for the _____ topology.
    A. Star
    B. Mesh
    C. Ring
    D. Root   (2 marks)

7. Legal information gathering techniques such as studying a firm's press releases and attending trade shows is known as _____.
   A. Competitive advantage
   B. Pretexting engineering
   C. Competitive intelligence
   D. Industrial espionage (2 marks)

8. Which of the following types of memory retains instructions when the computer power is turned off?
   A. Static RAM
   B. Read only memory
   C. Cache memory
   D. Dynamic RAM (2 marks)

9. In a computer application or user interface, what is a common term used to refer to a list of options or commands that a user can select from?
   A. Keyboard
   B. Cursor
   C. Menu
   D. Window (2 marks)

10. Which of the following deployment models involves introducing a new system in one functional area, then implementing the system to the whole organisation when it is working properly?
    A. Phased conversion
    B. Pilot conversion
    C. Parallel conversion
    D. Module conversion (2 marks)

11. Another name for mixed reality technology is_____.
    A. Extended reality
    B. Augmented reality
    C. Virtual reality
    D. Digital reality (2 marks)

12. Which of the following statements **BEST** defines utility computing?
    A. Making computing resources and infrastructure management available to a customer as needed
    B. Firms using their own IT infrastructure, such as hardware and maintaining their own data centers
    C. An infrastructure that pools various hardware and software components to a single IT environment
    D. Seamlessly connecting laptops, personal computers and smartphones to virtual private networks (2 marks)

13. Which of the following is **NOT** an example of a digital modulation technique?
    A. Amplitude shift keying
    B. Magnitude shift keying
    C. Frequency shift keying
    D. Phase shift keying (2 marks)

14. A Trojan horse refers to a segment of computer code that is embedded within an organisation's existing computer program that is triggered when specific conditions are met.
    A. True
    B. False (2 marks)

15. Which of the following is **NOT** an advantage of using CASE tools in system analysis?
    A. Enhanced documentation
    B. Database management
    C. Improved communication
    D. Better quality assurance (2 marks)

16. Which of the following concepts is used for ensuring that data meets certain constraints?
    A. Data coherence
    B. Data schema
    C. Data suffrage
    D. Data integrity (2 marks)

17. Which of the following mechanisms combines solid-state drive elements with a traditional hard disk drive?
    A.   Solid state hard disk drive
    B.   Serial advanced technology
    C.   Solid state hybrid drive
    D.   Hot –swappable state drive   (2 marks)

18. The acronym that stands for the web address that specifies the location of a web page on the internet is _____.
    A.   WWW
    B.   HTML
    C.   ISP
    D.   URL   (2 marks)

19. Which of the following does **NOT** use NAND flash memory?
    A.   Hard disk drives
    B.   Solid state drives
    C.   Flash disks
    D.   Memory cards   (2 marks)

20. Which of the following network devices receives a request, processes it and returns a response?
    A.   Client
    B.   Server
    C.   Router
    D.   Node   (2 marks)

21. Which of the following is **NOT** a non-relational database?
    A.   Document database
    B.   Columnar database
    C.   MySQL database
    D.   Key-value store   (2 marks)

22. A collection of related computer system operations that a user is authorised to perform is known as:
    A.   Privileges
    B.   Installation
    C.   Identification
    D.   Administration   (2 marks)

23. Which of the following technologies is used to replace the real world with a simulated world?
    A.   Wearable computers
    B.   Internet of things
    C.   Augmented reality
    D.   Virtual reality   (2 marks)

24. One advantage of in-house development compared with purchasing a pre-written application is:
    A.   Takes a shorter time to implement
    B.   Predictability in terms of costs
    C.   Meets the company's requirements
    D.   Takes a longer time to implement   (2 marks)

25. Which one of the following is an example of structured data?
    A.   Facebook posts
    B.   Audio files
    C.   Invoice items
    D.   Email messages   (2 marks)

26. Which one of the following types of network media is the **MOST** secure?
    A.   Satellite transmission
    B.   Fiber-optic cable
    C.   Microwave
    D.   Coaxial cable   (2 marks)

27. Which one of the following refers to a method of running applications that virtualise the operating system?
    A. Repositories
    B. Containers
    C. Disk buffers
    D. Vapourware (2 marks)

28. Which one of the following methods allows for steadily updating software projects where the new computer code is written and tested?
    A. Application as a service
    B. End-user development
    C. Software as a service
    D. Continuous development (2 marks)

29. Which one of the following refers to a computer which does not offer the full functionality of a PC, and has to access applications over a network server?
    A. Thick client
    B. Thin client
    C. Fat client
    D. Notebook (2 marks)

30. Which type of transmission uses a start bit and stop bit on the front and back of each character?
    A. Asynchronous transmission
    B. Synchronous transmission
    C. Serial transmission
    D. Parallel transmission (2 marks)

31. Select from the list below one characteristic of Big Data.
    A. Miniature
    B. Constant
    C. Velocity
    D. Vector (2 marks)

32. What type of display technology uses individual organic compounds to emit light when an electric current is applied and is known for its ability to provide deep blacks and vibrant colors?
    A. LCD
    B. OLED
    C. CRT
    D. LED (2 marks)

33. Which one of the following network cable types is known for its immunity to electromagnetic interference (EMI), making it suitable for high-speed data transmission and often used in data centers and industrial environments?
    A. Coaxial Cable
    B. Twisted Pair Cable
    C. Fiber Optic Cable
    D. USB Cable (2 marks)

34. Name the process in which a company allows pre-approved programs to run on its protected computers.
    A. Whitelisting
    B. Allow listing
    C. Grey listing
    D. Blacklisting (2 marks)

35. Which one of the following addresses is found on the network interface card and used to identify a specific device on a network?
    A. IP address
    B. Software address
    C. Physical address
    D. Subnet address (2 marks)

36. Building cloud infrastructure and applications for specific businesses or industry is referred to as _____.
    A.   Hybrid cloud
    B.   Public cloud
    C.   Enterprise cloud
    D.   Vertical cloud   (2 marks)

37. Which one of the following service models provides customers with a software development and testing environment?
    A.   Desktop a service
    B.   Platform as a service
    C.   Software as a service
    D.   Anything as a service   (2 marks)

38. Which one of the following is **NOT** a characteristic of high-level programming languages?
    A.   Human oriented
    B.   High abstraction
    C.   They are portable
    D.   Mnemonic codes   (2 marks)

39. Which one of the following does **NOT** aid in software development collaboration and code review?
    A.   IDE software
    B.   Version control systems
    C.   Code repositories
    D.   Salesforce tools   (2 marks)

40. Which cable has a transmission distance of between 200 to 500 meters?
    A.   Twisted pair cable
    B.   Coaxial cable
    C.   Fiber optic cable
    D.   Universal serial bus   (2 marks)

41. Which one of the following vulnerabilities involves attackers executing malicious SQL commands in a website?
    A.   SQL slammer
    B.   SQL cache
    C.   SQL injection
    D.   SQL predicate   (2 marks)

42. Which testing is done by real users at the user's site?
    A.   Gamma testing
    B.   Alpha testing
    C.   Delta testing
    D.   Beta testing   (2 marks)

43. Purchase of an insurance policy is an example of _____strategy.
    A.   Risk transfer
    B.   Risk acceptance
    C.   Risk limitation
    D.   Risk avoidance   (2 marks)

44. Which type of cable can be used to connect a PC to another PC?
    A.   Patch
    B.   Straight
    C.   Rollover
    D.   Crossover   (2 marks)

45. Which of the following technologies does **NOT** contribute towards green technology?
    A.   Virtualisation technology
    B.   Donating old computers
    C.   On-premise data centers
    D.   Energy efficient CPUs   (2 marks)

46. Which of the following is **NOT** a form of identity theft?
    A. Dumpster diving
    B. Malware
    C. Phishing
    D. Elder fraud   (2 marks)

47. A separate organisational LAN that is located between an organisation's internal network and an external network is known as _____.
    A. Embedded zone
    B. Demilitarised zone
    C. Perimeter zone
    D. Affiliate zone   (2 marks)

48. Convert 81.625 into a binary number.
    A. 1000111.111001
    B. 1101001.110110
    C. 1010001.110110
    D. 1010001.101000   (2 marks)

49. Which model offers a basic service for free and then charges a premium for upgrades or advanced features?
    A. Freemium
    B. Shareware
    C. Freeware
    D. Open source   (2 marks)

50. Which one of the following combination will result to 1 in a xor logic?
    A. 1 xor 1
    B. 0 xor1
    C. 0 xor 0
    D. 1 xor 2   (2 marks)

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DIPLOMA IN DATA MANAGEMENT AND ANALYTICS (DDMA)

DIPLOMA IN COMPUTER NETWORKS AND SYSTEMS ADMINISTRATION (DCNSA)

LEVEL I

INTRODUCTION TO COMPUTING SYSTEMS

MONDAY: 21 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.　　Which of the following parts of a processor contains the hardware necessary to perform all the operations required by a computer?
　　　A.　　　Controller
　　　B.　　　Registers
　　　C.　　　Cache
　　　D.　　　Data path　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　(2 marks)

2.　　Which of the following is **NOT** an advantage of multiprogramming?
　　　A.　　　Increased CPU Utilisation
　　　B.　　　Increased Throughput
　　　C.　　　Longer Turnaround Time
　　　D.　　　Improved Memory Utilisation　　　　　　　　　　　　　　　　　　　　　(2 marks)

3.　　The device used for converting maps, pictures, and drawings into digital form for storage in computers is known as _____.
　　　A.　　　Image Scanner
　　　B.　　　Digitizer
　　　C.　　　MICR
　　　D.　　　Scanner　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　(2 marks)

4.　　Which of the following is a computer system that sends requests to the web server and displays the webpages it receives in response?
　　　A.　　　Web Client
　　　B.　　　User
　　　C.　　　Web Browser
　　　D.　　　Web Server　　　　　　　　　　　　　　　　　　　　　　　　　　　　(2 marks)

5.　　Which of the following services allow a user to log in to another computer somewhere on the network?
　　　A.　　　E-mail
　　　B.　　　UseNet
　　　C.　　　Telnet
　　　D.　　　FTP　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　(2 marks)

6.　　Which of the following is **NOT** a type of computer on the basis of operation?
　　　A.　　　Digital
　　　B.　　　Analog
　　　C.　　　Hybrid
　　　D.　　　Remote　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　(2 marks)

7. Which of the following is **NOT** a function of a task bar?
   A. Taskbars give access to the complete operating system and all programs installed
   B. Taskbars help keep account and manage currently running programs
   C. It is capable of providing information such as the current time, general status of the laptop and apps running in the background
   D. Make computer to run and connect to input devices such as the monitor, keyboard and mouse   (2 marks)

8. The diagnostic mode on a computing device that helps troubleshoot device issues such as slow speeds or frequent crashes is known as _____.
   A. Safe mode
   B. Boot loading
   C. Power on Self-Test
   D. Normal mode   (2 marks)

9. A set of programs that can manage computer hardware resources and provide common services for application software is known as _____.
   A. Operating system
   B. MS PowerPoint
   C. MS Word
   D. Web browser   (2 marks)

10. The operating system that is self-contained in a device and is resident in the ROM is known as _____.
    A. Multi-processor operating system
    B. Embedded operating system
    C. Real time operating system
    D. Batch operating system   (2 marks)

11. A technologically-based attack on one person who has been targeted for reasons of anger, revenge or control is known as _____.
    A. Phishing
    B. Bulling
    C. Stalking
    D. Identity theft   (2 marks)

12. A software program or a hardware device that filters all data packets coming through the internet or a network is known as _____.
    A. Antivirus
    B. Firewall
    C. Cookies
    D. Malware   (2 marks)

13. Which of the following refers to the exploration of appropriate, ethical behaviors related to the online environment and digital media platform?
    A. Cyber low
    B. Cyber ethics
    C. Cybersecurity
    D. Cyber safety   (2 marks)

14. Which of the following is the analysis and review of collective network statistics to define the quality of services offered by the underlying computer network primarily measured from an end-user perspective?
    A. Security analysis
    B. Baseline performance
    C. Reliability analysis
    D. Network Performance   (2 marks)

15. In the computer networks, the encryption techniques are primarily used for improving the_____.
    A. Security
    B. Performance
    C. Reliability
    D. Longevity   (2 marks)

16. Which of the following tools allows you to install or connect a device such that the operating system automatically recognises, configures and installs the appropriate drivers for the device?
    A. Control Panel
    B. Plug and Play
    C. Remote assistant
    D. Credential Manager (2 marks)

17. Which of the following is **NOT** a type of broadband internet connections?
    A. Satellite
    B. DSL
    C. Dial up
    D. Cable (2 marks)

18. Which of the following refers to irrelevant or unsolicited messages sent over the internet to a large number of users for the purposes of advertising or spreading malware?
    A. Spam
    B. Backbone
    C. Usenet
    D. News group (2 marks)

19. Which of the following is a method of storing and organising computer files so that one can easily find them and access them?
    A. File system
    B. Directory of images
    C. Search engine
    D. World wide web (2 marks)

20. Internet Printing Protocol (IPP) is a specialised communication protocol for communication between client devices and printers. Which of the following does one need to install when enabling internet printing?
    A. Task Manager
    B. Dynamic Frequency Selection
    C. Internet Information Services
    D. Group Policy Object (GPO) Manager (2 marks)

21. Which of these is a correct email address?
    A. userName@website@com
    B. userName.website.com
    C. userName.website@com
    D. userName@website.com (2 marks)

22. When you copy files from one folder to another folder within the same partition, you get the _____
    A. Same permission as the source
    B. Same permission as the target
    C. No permission is set
    D. Everyone has full permission (2 marks)

23. You could run multiple operating systems concurrently on one machine by using which of the following technology?
    A. Virtual machine
    B. Virtual directory
    C. Terminal server
    D. Remote access (2 marks)

24. Which of the following is a visual connection between two or more remote parties over the internet that simulates a face-to-face meeting.
    A. Satellite tracking
    B. Video conferencing
    C. Traffic management system
    D. Industrial safety system (2 marks)

25. _____ contains billions of documents in the form of webpages and is one of the most popular services on the internet.
   A.   Web
   B.   Intranet
   C.   Telnet
   D.   FTP   (2 marks)

26. An interconnected network exclusively used within organisations such as banking and business firms and uses web technologies for sharing data or information internally is known as _____.
   A.   Protocol
   B.   Intranet
   C.   Internet
   D.   Hypertext   (2 marks)

27. Octal equivalent of hexadecimal code, F3A1 is?
   A.   173101
   B.   176541
   C.   171641
   D.   158661   (2 marks)

28. Which of the following is the binary equivalent of the decimal number 0.4375?
   A.   0.0111
   B.   0.1011
   C.   0.1100
   D.   0.1010   (2 marks)

29. Which of the following is the decimal equivalent of the binary number 101001.1011?
   A.   41.0875
   B.   40.6875
   C.   41.6875
   D.   40.0875   (2 marks)

30. Which of the following statements **BEST** describes octal system?
   A.   Needs less digits to represent a number than in the binary system
   B.   Needs more digits to represent a number than in the binary system
   C.   Needs the same number of digits to represent a number as in the binary system
   D.   Needs the same number of digits to represent a number as in the decimal system   (2 marks)

31. Which of the following is **NOT** a difference between paging and segmentation?
   A.   No fragmentation is required in both
   B.   A page is of fixed size, while segment is of varying size
   C.   A page is a physical unit of information while segment is a logical unit of information
   D.   A page is invisible to the user's program while a segment is visible to the user's program   (2 marks)

32. Computer uses _____ number system to store data and perform calculations.
   A.   Binary
   B.   Octal
   C.   Decimal
   D.   Hexadecimal   (2 marks)

33. Which of the following computers does **NOT** support multiple users at the same time?
   A.   Mainframe
   B.   Workstation
   C.   Server
   D.   Supercomputer   (2 marks)

34. Which of the following enables the service to take full advantage of the service security features of Windows and Microsoft Active Directory Domain Services?
   A.   Domain user account
   B.   Local user account
   C.   Service Account
   D.   Managed service account   (2 marks)

35. The symbol + in Boolean is also known as the _____ operator.
   A. AND
   B. OR
   C. ADD
   D. SUMMATION   (2 marks)

36. Which input device is commonly used for gaming?
   A. Keyboard
   B. Mouse
   C. Joystick
   D. Barcode Scanner   (2 marks)

37. A security _____ is a malicious act that aims to corrupt or steal data or disrupt an organisation's systems or the entire organisation.
   A. Threat
   B. Vulnerability
   C. Agent
   D. Exploit   (2 marks)

38. Which of the following statements **BEST** describes a Compiler?
   A. A program that places programs into memory and prepares them for execution
   B. A program that automate the translation of assembly language into machine language
   C. Program that accepts a program written in a high-level language and produces an object program
   D. Is a program that appears to execute a source program as if it were machine language   (2 marks)

39. Which of the following is **TRUE** about an assembler?
   A. A program that automates the translation of assembly language into machine language
   B. A program that accepts a program written in a high-level language and produces an object program
   C. A program that places programs into memory and prepares them for execution
   D. Is a program that appears to execute a source program as if it were machine language   (2 marks)

40. _____ refers to logical arrangement of a computer network.

   A. Topology
   B. Routing
   C. Networking
   D. Control   (2 marks)

41. Which one of the following is **NOT** true in relation to Kernel?
   A. Kernel remains in the memory during the entire computer session
   B. Kernel is made of various modules which cannot be loaded in running operating system
   C. Kernel is the first part of the operating system to load into memory during booting
   D. Kernel is the program that constitutes the central core of the operating system   (2 marks)

42. Which of the following is **NOT** a function of operating system?
   A. Addition and subtraction
   B. Controls the hardware
   C. Provides a platform for application software
   D. Interprets the user commands   (2 marks)

43. The process by which the operating system is loaded into the memory is referred to as _____.
   A. Booting
   B. Processing
   C. Loading
   D. Uploading   (2 marks)

44. The hardware in a computing device where the operating system, application programs and data in current use are kept so that they can be quickly reached by the device's processor is known as _____.
   A. RAM
   B. BROM
   C. Hard Disk
   D. Compact Disk   (2 marks)

45. A group of software programs bundled into a single package is called _____.
    A. Combination software
    B. A software suite
    C. A special package
    D. A software collection (2 marks)

46. What is the name of a directory or folder you are currently working?
    A. Working directory
    B. List directory
    C. Update directory
    D. Create directory (2 marks)

47. Consider this scenario; two datasets information related to more than 230 million DOT APP users including phone numbers, account names, and IDs were exposed to the public internet. This kind of security incident is known as _____ .
    A. Breach
    B. Threat
    C. Cloud
    D. Virtual (2 marks)

48. Which of the following **BEST** describes Cloud Cyber security?
    A. Delivery of computing services including servers, storage, databases, networking, software, analytics, and intelligence over the internet
    B. Practice of securing computer networks and user data in cloud computing environments
    C. Data center that supplies hosted services to a limited number of people, with certain access and permissions settings
    D. Hardware and software components required for proper implementation of internet (2 marks)

49. Which of the following illustrates a computer that can perform millions of tasks or calculations with the same consistency and accuracy?
    A. Reliability
    B. Speed
    C. Diligence
    D. Versatility (2 marks)

50. A page that is part of a larger website with articles written in a conversational style is known as?
    A. Podcast
    B. Blog
    C. Wiki
    D. DIM chat (2 marks)

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DIPLOMA IN DATA MANAGEMENT AND ANALYTICS (DDMA)

DIPLOMA IN COMPUTER NETWORKS AND SYSTEMS ADMINSTRATION (DCNSA)

LEVEL I

INTRODUCTION TO COMPUTING SYSTEMS

MONDAY: 24 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 programs is designed to perform specific tasks for the end users?

   A.   System software
   B.   Application software
   C.   Utility programs
   D.   Operating system

2.   Which of the following returns **FALSE** if neither x nor y is true, else returns **TRUE**?
   A.   LOGICAL OR
   B.   LOGICAL NOT
   C.   Logical AND
   D.   AND NOT

3.   Select a function of operating systems from the list below.
   A.   Connects geographically remote computers
   B.   Execution of instructions in a computer
   C.   To archive files from the hard disk
   D.   Loads and runs computer programs

4.   The part of the computer that does calculations, moving and processing of information is referred to as?
   A.   CPU
   B.   RAM
   C.   Motherboard
   D.   Hard Drive

5.   The part of computer that connects all other peripheral devices and allows them to communicate and work together is known as?
   A.   Operating System
   B.   Disk Drive
   C.   Output Device
   D.   Motherboard

6.   Workstations, notebook computers, tablets, handheld computers and smart phones are all examples of_____.
   A.   Analog computers
   B.   Mainframe computers
   C.   Personal computers
   D.   Super computers

7.   In a computer keyboard, Ctrl, Shift and Alt are all examples of_____.
   A.   Modifiers
   B.   Function
   C.   Alphanumeric
   D.   Adjustment

8.   Which of the following devices is used by stores to directly read the universal production code printed on each product sold.
       A.   Laser light
       B.   Spy cam
       C.   Bar code reader
       D.   Printer

9.   Which of the following **BEST** describes the role of cache memory in a computer?
       A.   Used for special instructions needed for detailed computer operations
       B.   Used to store frequently used data and instructions for faster processing
       C.   Used for writing and erasing program instructions temporarily during processing
       D.   Used to hold data and instructions between communication elements

10.   Which of the following devices are you likely to find in a star network topology?
       A.   Switch
       B.   Router
       C.   Brouter
       D.   Gateway

11.   In a URL, what would "index.html" denote?
       A.   A web resource used to link web pages in a website
       B.   A page used for organizing other web pages using an index
       C.   The default webpage for that specific website
       D.   A page used to bookmark that specific website

12.   Consider the following path C:\Device\Module\Module1.doc. What is name of the file in this path?
       A.   Device
       B.   Module
       C.   C
       D.   Module1.doc

13.   Which of the following is an example of a browser software?
       A.   Avira
       B.   AVG
       C.   Chrome
       D.   McAfee

14.   In computer networks, what is the purpose of encryption techniques?
       A.   Security
       B.   Performance
       C.   Reliability
       D.   Longevity

15.   Which of the following statements about computer virus is correct?
       A.   Virus is a small program that infects a large program in the user system
       B.   Virus is a file of the hacker.
       C.   Virus is an operating system that controls the entire OS
       D.   Virus has similar characteristics like corona virus

16.   What is the binary equivalent of the decimal number 44?
       A.   101101
       B.   110100
       C.   101100
       D.   111100

17.   The location of a resource on the internet is given by its_____
       A.   Protocol
       B.   Uniform Resource Locator
       C.   E-mail address
       D.   ICQ

18. From the data communication equipment given below, select those used for signal transmission.
    1. Twisted pair cables
    2. Microwaves and Satellite Signals
    3. Repeaters
    4. Analog Transmissions
    5. Fiber optics

    A. (1) and (5)
    B. (1) and (2)
    C. (1) (2) and (5)
    D. (1) (2) (3) and (5)

19. Which of the following statements is **NOT** true about a router as used in computer networks?
    A. A router connects two or more packet-switched networks or subnetworks.
    B. A router manages traffic between networks by forwarding data packets to their intended IP addresses
    C. A router allows multiple devices to use the same Internet connection
    D. A router continuously provides power to equipment during power line sags.

20. Which of the following validation checks ensures that data does not exceed a predetermined amount?
    A. Validity check
    B. Range check
    C. Format check
    D. Limit check

21. All the following statements regarding computer aided manufacturing are true **EXCEPT**?
    A. It is used in inflexible manufacturing
    B. It improves the efficiency of manufacturing process
    C. It reduces the time needed to set up machines
    D. It makes it possible for a company to respond to a customer's unique need

22. Which of the following models is **NOT** a cloud computing service model?
    A. Infrastructure as a service
    B. Platform as a service
    C. Software as a service
    D. System as a service

23. Which of the following statements **BEST** describes a virtual private network?
    A. A system that automatically creates snapshots of system file configurations on the Internet
    B. A method of accessing the corporate network by forming a secure tunnel through the Internet
    C. A method of securing a wireless network by introducing a wired network connection
    D. A digital phone network which carries voice, data and video over existing telephone networks

24. Computer based weather forecasting depends on accurate collection of data recorded by?
    A. Television transmission system
    B. Weather monitoring system
    C. Radar system
    D. Antenna system

25. Which of these reliability requirements aims at maintaining various software copies?
    A. Ambiguous requirements
    B. Redundancy requirements
    C. Recovery requirements
    D. Checking requirements

26. Name a cursor control device widely used in computer games and CAD/CAM applications
    A. Keyboard
    B. Joystick
    C. Mouse
    D. Stylus

27. Which one of the following practices would breach the integrity of a system?
   A. Locking the room to prevent theft
   B. Full access rights for all users
   C. Fitting the system with an anti-theft device
   D. Protecting the device against willful or accidental damage

28. Which of the following technologies is used to dispose computers in a way that minimises environmental impact?
   A. Green computing
   B. Cloud computing
   C. Autonomic computing
   D. Grid computing

29. Which of the following devices would be used to connect dissimilar networks?
   A. Switch
   B. Modem
   C. Router
   D. Gateway

30. One advantage of a solid state drive compared to using a hard disk is?
   A. Speed
   B. Cost
   C. Storage capacity
   D. User interface

31. Which of the following characteristics are associated with peer to peer networks?
   I. Scalability
   II. Centralised administration
   III. Each user controls access to his resources
   IV. These networks are generally small in size

   A. I and II
   B. II and III
   C. III and IV
   D. I and IV

32. In which of the following areas are robotics mostly applied in real life?
   A. Cooking
   B. Manufacturing
   C. Teaching
   D. Farming

33. Which of the following transmission media uses free space between networked devices?
   A. Guided media
   B. Optical media
   C. Unguided media
   D. Social media

34. What kind of transmission medium is **MOST** appropriate to carry data in a computer network that is exposed to electrical interferences?
   A. Optical fiber
   B. Unshielded twisted pair
   C. Coaxial cable
   D. Microwave

35. Computer logs designed to record activity at the system, application and user level are referred to as_____
   A. User controls
   B. Truth tables
   C. Audit trails
   D. Backup logs

36. Which Boolean operator is denoted by the (!) symbol?
    A.   Logical OR
    B.   Logical NOT
    C.   Logical AND
    D.   Logical XOR

37. Which of the following statements **BEST** describes an extranet?
    A.   A network that links selected resources of the Intranet with customers, suppliers and business partners
    B.   An internal corporate network built using Internet and World Wide Web standards and technologies
    C.   An email and database used to gain immediate access to information resources in law and government
    D.   A network that helps external users find specific web pages, applications and files on the Internet

38. Which of the following technologies can only function when there is an Internet connection?
    A.   Mobile computing
    B.   Electronic commerce
    C.   Biometric login
    D.   Closed-circuit television cameras

39. Which of the following is **NOT** an example of a file system?
    A.   NTFS
    B.   exFAT
    C.   FAT32
    D.   WINFS

40. Select from the list below a category of computer programs that are designed to assist users in the maintenance and care of their computers?
    A.   Utilities
    B.   Applications
    C.   Packages
    D.   Shells

41. What is the name given to a computer system that represents data as variable points along a continuous spectrum of values?
    A.   Analog system
    B.   Digital system
    C.   Mainframe system
    D.   Netbook system

42. What is the decimal equivalent of the binary number 0.0111_2?
    A.   4.375
    B.   0.4375
    C.   0.5375
    D.   -0.4375

43. Digital camera and web camera are popular examples of which category of input devices?
    A.   Audio
    B.   Video
    C.   Graphics
    D.   Pointing

44. Which of the following resources is used in networking to prevent external access to a system?
    A.   Firewall
    B.   Gateway
    C.   Router
    D.   Hub

45. Which of the following devices is used to produce softcopy output?
    A.   Printer
    B.   Scanner
    C.   Touch screen
    D.   Microphone

46. Which security threat involves capturing data packets over a network to intercept or steal data?
    A.   Sniffing
    B.   Redirecting
    C.   Alteration
    D.   Spamming

47. Which of the following characteristics are associated with Bluetooth technology?
    I.   Devices form their own personal area network
    II.   Direct line-of-sight transmission
    III.   Transmits information over short distances
    IV.   Covers a large geographical area

    A.   II and IV
    B.   I and IV
    C.   III and IV
    D.   I and III

48. Which of the following programs can execute high-level languages in a statement by statement manner?
    A.   Compiler
    B.   Interpreter
    C.   Sensor
    D.   Circuitry

49. Which type of operating system provides very limited or no interaction between the user and processor during the execution of work?
    A.   Batch
    B.   Multi-processing
    C.   Time sharing
    D.   Multi-tasking

50. Which generation of computers were manufactured using ICs with LSI and later with VLSI technology?
    A.   First
    B.   Second
    C.   Third
    D.   Fourth

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DIPLOMA IN DATA MANAGEMENT AND ANALYTICS (DDMA)

DIPLOMA IN COMPUTER NETWORKS AND SYSTEMS ADMINSTRATION (DCNSA)

LEVEL I

INTRODUCTION TO COMPUTING SYSTEMS

MONDAY: 5 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. In a computer system, which component controls the input and output activities?
   A.　Software
   B.　Hardware
   C.　Network
   D.　Data

2. Which of the following is a communication device that connects two similar local area networks?
   A.　Router
   B.　Bridge
   C.　Adapter
   D.　Hub

3. The Internet is the most popular and innovative creation within the world of technology. However, it has some limitations. Which of the following is **NOT** a limitation of the Internet?
   A.　Internet addiction disorder
   B.　Abundant information
   C.　Cyber crime
   D.　Social alienation

4. What is the name given to the security attack where hackers flood a Web site with useless traffic to overwhelm the network?
   A.　SQL injection
   B.　Pharming resources
   C.　Denial of service
   D.　Spoofing network

5. Which of the following statements **BEST** describes the term privacy as used in computer security?
   A.　It is a moral right to be left alone
   B.　The quality of being honest and having strong moral principles.
   C.　It is an acceptance of responsibility for honest and ethical conduct towards others
   D.　It is most easily obtained on the Internet

6. What is the name given to the purchase of an Internet domain name of a well known business for the purpose of making profit from its sale to that business?
   A.　Cybersquatting
   B.　Cyberpiracy
   C.　Met tagging
   D.　Keywording

7. Which of the following are networks that connect people within a company to each other and to the company network?
    A.   Bitstreams
    B.   Extranets
    C.   Intranets
    D.   Internets

8. The following are major categories of computer viruses **EXCEPT**?
    A.   Macro
    B.   File-infecting viruses
    C.   Script viruses
    D.   Trojan

9. Which of the following is not a computer malware?
    A.   Virus
    B.   Worm
    C.   Firewall
    D.   Trojan Horse

10. What is the name given to a group of conducting wires or lines over which electrical signals corresponding to data and instructions are transmitted?
    A.   Bus
    B.   Path
    C.   System
    D.   Stock

11. The following topologies are more affected by addition or removal of a node **EXCEPT**?
    A.   Star
    B.   Ring
    C.   Mesh
    D.   Bus

12. Which component of system software that provides an interface between the hardware and the user?
    A.   Utility
    B.   Translators
    C.   Operating System
    D.   Device driver

13. Which of the following is a type of wire that consists of a center wire surrounded by insulation and then a grounded shield of braided wire?
    A.   Twisted pair cable
    B.   Coaxial Cable
    C.   Fiber optical cable
    D.   Microwave System

14. Which of the following is **NOT** a type of computer network?
    A.   Personal Area Network
    B.   Metropolitan Area Network
    C.   County Area Network
    D.   Wide Area Network

15. Which of the following is a type of main memory?
    A.   Floppy disk
    B.   Hard disk
    C.   Random and Sequential Memory
    D.   Read only Memory

16. Which of the following statements **BEST** describes an application software?
    A. Menu driven specific software
    B. Any program, or group of programs, that is designed for the end user
    C. Software for programming.
    D. Software designed to control and work with computer hardware

17. The input device that uses a light sensitive detector to select objects on a display screen is known as?
    A. Touchpad
    B. Touchscreen
    C. Note pad
    D. Light pen

18. Which topology that is best described as a network topology in which each network component is physically connected to a central node?
    A. Bus
    B. Star
    C. Ring
    D. Round

19. Which component of computer hardware that executes instructions?
    A. Processor
    B. Keyboard
    C. Memory
    D. Printer

20. Which of the following **BEST** describes the term disk formatting process?
    A. Aligning disk
    B. Linking hard disk
    C. Storing data
    D. Creation of sectors

21. Which is the correct order of how programming languages have evolved?
    A. Procedural, non-procedural, object oriented, machine, assembler
    B. Machine, assembler, procedural, non-procedural, object oriented
    C. Machine, procedural, assembler, non-procedural, object oriented
    D. Machine, assembler, object oriented, procedural, non-procedural

22. Which of the following is an electronic device that converts raw data into meaningful information?
    A. Computer
    B. Printer
    C. Keyboard
    D. Monitor

23. An input device that is hand-held or stationary used to capture and read information widely used in supermarket is?
    A. Keyboard
    B. Mouse
    C. Trackball
    D. Barcode reader

24. What is the name given to the technology that allows transmission of data, voice and video via a computer or any other wireless enabled device without having to be connected to a fixed physical link?
    A. Group computing
    B. Network computing
    C. Mobile computing
    D. Digital computing

25. Which of the following is a small program that places the operating system (OS) of a computer into memory?
    A. Process control block
    B. File control block
    C. Boot loader
    D. Bootstrap

26. Which of the following is **NOT** a function of the operating system?
    A. Control over system performance
    B. Job accounting
    C. Error Correction
    D. Clock Management

27. A shared boundary across which two or more separate components of a computer system exchange information is known as?
    A. Keyboard
    B. Hardware
    C. Software
    D. Interface

28. Which of the following **NOT** a characteristic of High level languages?
    A. Requires no translation
    B. Machine independent
    C. Interactive execution
    D. Easy to code

29. Which of the following statements is/are true relating to media used for data communication?
    I. Coaxial cable cost is lower that twisted pair
    II. Fiber optic cables provide faster transfer rates than twisted pair
    III. Twisted Pair is costly to install than fiber optic cable

    A. I only
    B. I and II only
    C. II only
    D. II and III only

30. The decimal equivalent of 10110_2 is
    A. 10110
    B. 11
    C. 22
    D. 202

31. What is the name given to the software used to convert an assembly language program into machine code?
    A. Assembler
    B. Interpreter
    C. Compiler
    D. Translator

32. Which is the software program that allows a user to locate, access, and display web pages?
    A. Operating system
    B. World wide web
    C. Web browser
    D. Internet

33. Which of the following types of memory is volatile?
    A. RAM
    B. ROM
    C. PROM
    D. EPROM

34. What is the name given to the setup which identifies, configures, tests and connects computer hardware to the operating system immediately after a computer is turned on?
   A. CMOS
   B. CPU
   C. BIOS
   D. VDU

35. Which one of the following devices functions as an input device only?
   A. ROM
   B. Flash
   C. Monitor
   D. Joystick

36. Which type of injury is caused by a poor or awkward posture at the computer for an extended period?
   A. Nausea
   B. Mental stress
   C. Back pain
   D. Eye problems

37. Which input device is used to read answer sheet of a multiple-choice examination paper?
   A. Digitizer
   B. OCR
   C. MICR
   D. OMR

38. Consider the following computer applications:
   I. Guiding Tourists based on their current location
   II. Customisation of automobiles
   III. Advertising via Internet
   IV. Customisation of domestic environments

   Which of the above applications have benefited from computing that is made to appear anytime and everywhere?
   A. I & II only
   B. II & II only
   C. I, II & III only
   D. I, II & IV only

39. Which of the following statements **BEST** describes the result of hard disk fragmentation?
   A. Hard disk data access speed is reduced
   B. Network access speed becomes slow
   C. Hard disk becomes totally inaccessible
   D. Some data will get erased from the hard disk

40. The binary number equivalent to the 3502_8 is_____.
   A. 11101000010
   B. 10000101011
   C. 110110101110
   D. 111010010

41. Which of the following is **NOT** an advantage of using a low -level language?
   A. Makes more efficient use of primary memory
   B. Tailor a program to a specific piece of hardware
   C. To perform a task very quickly
   D. To enable the program to be run on multiple platforms

42. Consider the following symbols.
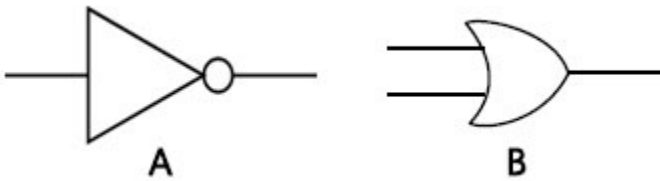
In digital logic the above symbols A and B respectively represent the gates
A. NOR and AND
B. NOR and OR
C. OR and NOR
D. NOT and OR

43. The following resources are managed by an operating system, **EXCEPT?**
A. Processor
B. Port
C. Memory
D. File

44. Which of the following are components of the Central Processing Unit (CPU) of a computer?
I. Arithmetic and logic unit
II Register
III Port
IV Hard disk

A. I & II
B. I & III
C. I & IV
D. II & IV

45. Under which of the following categories is a desktop computer classified?
A. Microcomputer
B. Minicomputer
C. Mainframe
D. Supercomputer

46. Which of the following is **NOT** a utility program?
A. Edit
B. Sort
C. File maintenance
D. Booting

47. A programming language that is executed fast and saves on memory is called?
A. High Level Language
B. Fourth generation language
C. Machine Code
D. Low level language

48. The following are examples of search engines, **EXCEPT?**
A. Google
B. AltaVista
C. Lycos
D. Opera

49.	Which of the following is a primary feature of an operating system?
	A.	Virus scanning
	B.	File management
	C.	Creating databases
	D.	Web searching

50.	Select the logical operation corresponding to the following truth table.

Input 1	Input 2	Output
0	0	1
0	1	0
1	0	0
1	1	0

	A.	OR
	B.	AND
	C.	NOR
	D.	NAND

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DIPLOMA IN DATA MANAGEMENT AND ANALYTICS (DDMA)

DIPLOMA IN COMPUTER NETWORKS AND SYSTEM ADMINSTRATION (DCNSA)

LEVEL I

INTRODUCTION TO COMPUTING SYSTEMS

MONDAY: 1 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.

1.   Identify the statement that **BEST** describes a computer hardware.
         A.   The set of integrated devices which takes input, process it and produce output.
         B.   The physical components of a computer that we can touch and feel.
         C.   The set of instructions used to operate computers and execute specific tasks.
         D.   The term used to denote people who operate a computer.

2.   Which of the following is an input device?
         A.   Printer
         B.   Bus
         C.   Sensor
         D.   Monitor

3.   A software that is made for an individual or business that performs tasks specific to their needs is known as?
         A.   System software
         B.   Custom software
         C.   Application software
         D.   Off -the- self software

4.   _____ is a set of programs that control and manage the operations of computer hardware?
         A.   Application software
         B.   Device driver
         C.   Programming language
         D.   System Software

5.   BIOS is an acronym for _____.
         A.   Basic Input Output System
         B.   Basic Interface Output System
         C.   Basic Input Off system
         D.   Basic Instruction Output Software

6.   In a computer, the component used to carry out logical operations is called _____.
         A.   CPU
         B.   ALU
         C.   VDU
         D.   CMOS

7.   Which of the following is a memory built into a computer which stores data permanently?
         A.   RAM
         B.   CMOS
         C.   CD-ROM
         D.   ROM

8. There are various classification of computers. Identify among the following computers, one which is classified according to size.
   A. General purpose
   B. Digital
   C. Mainframe
   D. Analogue

9. The technology that was used in the second-generation computers was called?
   A. Vacuum tubes
   B. Integrated circuits
   C. Transistors
   D. Large scale integrated circuits

10. The following are peripheral devices.
    I. Scanner
    II. Printer
    III. Monitor
    IV. Keyboard
    V. Mouse
    VI. Plotter

    Identify the trio containing output devices only?

    A. I, II, IV
    B. I, IV, V
    C. II, III, V
    D. II, III, VI

11. What is the name given to a computer on a network?
    A. Node
    B. Client
    C. Terminal
    D. Online

12. Which of the following is NOT a type of a network topology?
    A. Mesh
    B. Tree
    C. Man
    D. Star

13. A _____ is a dynamic network device used to reproduce the signals when they transmit over a greater distance so that the signal's strength remains equal.
    A. Switch
    B. Repeater
    C. Modem
    D. Router

14. Which one of the following is NOT a network operating system?
    A. DOS
    B. Ms Windows Server
    C. UNIX
    D. Linux

15. Which one of the following is **NOT** a computer programming language?
    A. A++
    B. BASIC
    C. PASCAL
    D. C++

16. What is the hexadecimal equivalent of the 10101101101 binary number?
    A. ADA
    B. 1389
    C. 56D
    D. 2555

17. Which of the following statement **BEST** describes the function of a modem in a network?
    A. To allow multiple devices to use the same Internet connection
    B. To transmit digital data over communication lines
    C. To connect multiple computer networking devices together
    D. To store and forward frames between different segments

18. Identify the best statement which describes the importance of Uniform Resource Locator (URL) in the internet.

    A. It helps people remember websites and serve as representations of a person or company online.
    B. It helps create brand awareness and showcasing your brand to prospective customers
    C. It is the fundamental network identification for any resource connected to the web
    D. It is the gateway to the internet

19. Which if the following is **NOT** a web browser?
    A. Mozilla Firefox
    B. Microsoft Outlook
    C. Google Chrome
    D. Safari

20. Which of the following is **NOT** a suitable way to keep an organisation's information communication technology systems safe and secure?
    A. Acquiring state of the art equipment
    B. Use strong passwords
    C. Be wary of suspicious emails
    D. Install anti-virus and malware protection

21. Which of the following BEST defines an exploit as used in computer security?
    A. It is a malicious act that aims to corrupt or steal data or disrupt an organisation's systems or the entire organisation
    B. It is a measure of the extent to which an entity is threatened by a potential circumstance or event, and typically a function of the likelihood of occurrence.
    C. It is a weakness, flaw, or error found within a security system that has the potential to be leveraged by a threat agent in order to compromise a secure network.
    D. It is a program designed to find and take advantage of a security flaw or vulnerability in an application or computer system.

22. _____is a group of interconnected Local Area Networks within a limited geographical area like school campus, university campus, military bases, or organisational campuses and corporate buildings.
    A. Metropolitan area network (MAN)
    B. Wide area network (WAN)
    C. Campus area network (CAN)
    D. Private area network (PAN)

23. Which among the following is not necessary when setting up a local area network in a small business?
    A. Shared hardware resources
    B. Information systems developers
    C. Networking operating system
    D. A communications medium

24. Which one of the following is **NOT** a function of a compiler?
    A. To convert one form of program to another
    B. To preserve the meaning of source code
    C. To convert low level language code to machine code
    D. To report errors that occur during compilation process

25. Which one of the following **BEST** describes a hub in a computer network?
    A.   Determines the best route to transmit data
    B.   Inspects traffic and accepts or declines transmission
    C.   Broadcasts data to specific network devices
    D.   Broadcasts data to all network device

26. Which of the following is **NOT** a function of an operating system?
    A.   Control over system performance
    B.   Job costing
    C.   Error detection.
    D.   Coordination between other software and users

27. Which one of the following is a limitation of computer networks in an organization?
    A.   Sharing information and resource
    B.   Retrieving information
    C.   Security issues
    D.   Speedy interpersonal communication

28. Which one of the following is **NOT** an element of a computer network?
    A.   Excel
    B.   Node
    C.   Server
    D.   Network Interface card

29. What is the octal equivalent of 874?
    A.   1552
    B.   3610
    C.   2551
    D.   5215

30. Which of the following is a disadvantage of off-the-shelf packages?
    A.   Offers free trial to the user.
    B.   No need to train them separately
    C.   It is expensive in the long run
    D.   Users will be able to look for product reviews online

31. Which of the following is the device used for converting maps, pictures, and drawings into digital form for storage in computers?
    A.   Image Scanner
    B.   Digitizer
    C.   MICR
    D.   Scanner

32. What are the two Network layer firewall sub-categories?
    A.   State full firewall and stateless firewall
    B.   Bit oriented firewall and byte-oriented firewall
    C.   Frame firewall and packet firewall
    D.   Network layer firewall and session layer firewall

33. Which of the following **BEST** describes a router?
    A.   A device which broadcasts data to all devices connected in a network.
    B.   A device that is designed to receive, analyse, and forward data packets between computer networks.
    C.   A device which transfers data from one computer network to another computer network through telephone lines.
    D.   A device that selects between several analogue or digital input signals and forwards the selected input to a single output line.

34. In what kind of connection do three or more devices share a link connection?
    A.   Unipoint
    B.   Multipoint
    C.   Point to point
    D.   Simplex

35. What is the main function of the command interpreter?
    A.   To provide the interface between the API and application program
    B.   To handle the files in the operating system
    C.   To get and execute the next user-specified command
    D.   To open the URL

36. Select a statement that **BEST** describes file attributes:
    A.   It is a setting associated with computer files that grant or deny certain rights to how a user or the operating system can access that file.
    B.   It is any file which is smaller than its original size and could contain one or more files, or even a directory
    C.   It refers to the process of protecting a file from unauthorized changes, including cyber-attacks.
    D.   It is all about safeguarding your business-critical information from prying eyes by implementing stringent access control measures and flawless permission hygiene.

37. Where is the operating system placed in the memory?
    A.   Either low or high memory (depending on the location of interrupt vector)
    B.   In the low memory
    C.   In the high memory
    D.   In an extended partition

38. When the process is returned for execution after an interrupt service _____ should be loaded again.
    i)   Register contents
    ii)   Condition codes
    iii)   Stack contents
    iv)   Return addresses

    A.   i, iv
    B.   ii, iii and iv
    C.   iii, iv
    D.   i, ii

39. CPU has two modes, privileged and non-privileged. What is required in order to change the mode from privileged to non-privileged.
    A.   A hardware interrupt is needed
    B.   A software interrupt is needed
    C.   Either hardware or software interrupt is needed
    D.   A non-privileged instruction is needed

40. From the scenarios listed below determine the right one to justify interrupt mode of data transfer.
    i)   Bulk transfer of several kilo-byte
    ii)   Moderately large data transfer of more than 1kb
    iii)   Short events like mouse action
    iv)   Keyboard inputs
    A.   i and ii
    B.   ii
    C.   i, ii and iv
    D.   iv

41. In SCSI (Small Computer Systems Interface) disks used in high end PCs, the controller maintains a list of _____ on the disk. The disk is initialised during _____ formatting which sets aside spare sectors not visible to the operating system.

    A.   destroyed blocks, partitioning
    B.   bad blocks, low level formatting
    C.   destroyed blocks, high level formatting
    D.   bad blocks, partitioning

42. _____ is a paradigm of distributed computing to provide the customers on-demand, utility-based computing service.
    A.   Remote Sensing
    B.   Remote Invocation
    C.   Cloud Computing
    D.   Private Computing

43. _____ enables the migration of the virtual image from one physical machine to another.
    A.   Visualisation
    B.   Virtualisation
    C.   Migration
    D.   Virtual transfer

44. _____ is an emerging branch in computer science, which interprets means and method of making computers think like human beings.
    A.   Block chain
    B.   VR
    C.   AI
    D.   Cloud computing

45. In a timeshare operating system, when the time slice assigned to a process is completed, the process switches from the current state to?
    A.   Suspended state
    B.   Terminated state
    C.   Ready state
    D.   Blocked state

46. Which networking device is responsible for forwarding packets between networks and processing the routing information included in the packet.
    A.   Bridge
    B.   Firewall
    C.   Router
    D.   Hub

47. Which of the following networks extends a private network across public networks?
    A.   Local area network
    B.   Virtual private network
    C.   Enterprise private network
    D.   Storage area network

48. Of the statements below, which one gives the BEST definition of a file transfer protocol?
    A.   Refers to transmission of website data across the internet.
    B.   Refers to a process that involves the transfer of files between devices over a network.
    C.   Refers to a set of rules, conventions or data structures that allows communication between devices in a network
    D.   Refers to formats and rules for exchanging data and messages between computers on a single network or several internet-connected networks.

49. Which of the following statements can be associated with OSI model?
    A.   A structured way to discuss and easier update system components
    B.   One layer may duplicate lower layer functionality
    C.   Functionality at one layer no way requires information from another layer
    D.   It is an application specific network model

50. Which of the following is a system program that integrates a program's individually compiled modules into a form that can be executed?
    A.   Interpreter
    B.   Assembler
    C.   Compiler
    D.   Linking Loader

    ....

DIPLOMA IN DATA MANAGEMENT AND ANALYTICS

LEVEL I

INTRODUCTION TO COMPUTING SYSTEMS

APRIL 2022   **TIME: 3HOURS**

INSTRUCTIONS: ANSWER ALL QUESTIONS.

QUESTION 1
A computer is known to be versatile meaning it is capable of performing almost any task. Among the following, identify a task which currently **CANNOT** be done by a computer.
- A. Designing aircraft wings
- **B. Coming up with creative thoughts**
- C. Storing data for long periods
- D. Carrying complex computations.

QUESTION 2
Which type of operating system is best described as the one which allows multiple users to access a single system with one operating system?
- **A. Multiuser**
- B. Multitasking
- C. Multiprogramming
- D. Multiprocessing

QUESTION 3
_____ a computer refers to the process of powering on the computer and starting the operating system.
- A. Scanning
- **B. Booting**
- C. Upgrading
- D. Resetting

QUESTION 4
Which one of the following is **NOT** a computer application area in entertainment?
- **A. Computer aided learning**
- B. Playing video games
- C. Keeping track of one's location during camping or hiking trips.
- D. GPS tracking devices are frequently used for nature walks

QUESTION 5
What is the octal equivalent of the following decimal number 462?
- A. 617
- B. 1CE
- **C. 716**
- D. 462

QUESTION 6

Which one of the following is **NOT** an input device?
- A. Mouse
- B. Sensor
- **C. Digital camera**
- D. Speaker

QUESTION 7

The following are commonly used high level languages, **EXCEPT?**
- A. Python
- **B. Assembly**
- C. Java
- D. C++

QUESTION 8

Which one of the following methods **CANNOT** be used to detect, prevent or remove malware?
- A. Use antivirus software
- **B. Installing CCTV camera**
- C. Avoid suspicious emails, links, and sites
- D. Keep software up to date

QUESTION 9

What is the hexadecimal equivalent of the following octal number 175?
- **A. 7D**
- B. 125
- C. 175
- D. 713

QUESTION 10

Which one of the following is a storage medium?
- A. Scanner
- **B. Random access memory**
- C. Optical mark recognition
- D. Digitiser

QUESTION 11

A _____ device is any connected device that provides a computer with additional functionality.
- **A. peripheral**
- B. input
- C. storage
- D. output

QUESTION 12

Identify among the following that which is **NOT** a utility software?
- A. Antivirus
- B. File management
- **C. Language translator**
- D. Disk compression

QUESTION 13

The capacity of read only memory (ROM) is more than that of random-access memory (RAM).
- A. True
- **B. False**

QUESTION 14

What is defined as the running of two or more programs or sequences of instructions simultaneously by a computer with more than one central processor?
- **A. Multiprocessing**

B. Multiprogramming
C. Multitasking
D. Multiuser

QUESTION 15
Which of the following is **NOT** a coding scheme of representing data in a computer memory?
A. Binary coding decimal
B. American Standard Code for Information Interchange (ASCII)
C. Morse code
D. Extended Binary Coded Decimal Interchange Code(EBCDIC)

QUESTION 16
Which of the following is the operation carried out by a NOR gate?
A. Inversing
B. Reversing
C. Reverting
D. Converting

QUESTION 17
Identify the function of a control unit from among the following.
A. Transfers data from main memory to processor
B. **Regulates and integrates the operations of the computer**.
C. carries out arithmetic and logic operations on the operands in computer
D. accept, store, and transfer data and instructions that are being used immediately by the CPU

QUESTION 18
A _____ is a networking device that allows communication between devices within a network, such as your local home network.
A. Gateway
B. switch
C. modem
D. router

QUESTION 19
Identify the **BEST** statement that gives the main purpose of file management system in an operating system.
A. To create a copy of data that can be recovered in the event of a primary data failure.
B. To enable users to create and store new files on a device.
C. To check and make corrections on the hard disk drive.
D. To move data blocks on the hard drive around to bring all the parts of a file together.

QUESTION 20
Which of the statements below **BEST** describes hardware?
A. Provides the low-level control for a device's specific hardware
B. Collection of all the parts that are tangible.
C. Set of instructions for a computer to perform specific operations
D. Sends data to a computer, allowing you to interact with and control it.

QUESTION 21
Which one of the following is **NOT** a mobile operating system?
A. VMware
B. Android
C. Blackberry
D. Symbian

QUESTION 22
_____ is the use of computers to create, process, store, retrieve, and exchange all kinds of electronic data and information.
A. Networking

B. **Information technology**
C. Databases
D. Processing

QUESTION 23
When creating a user account, the administrator should assign the following **EXCEPT?**
   A. Access credentials
   B. User role
   C. User security profile
   D. **Workstation to use**

QUESTION 24
Which of the following is **NOT** a characteristic of machine language?
   A. Do not require translation
   B. Uses binary codes
   C. **Slow to execute**
   D. Machine dependent

QUESTION 25

_____ translates program codes into machine codes, instruction by instruction**.**
   A. A compiler
   B. **An interpreter**
   C. An assembler
   D. A loader

QUESTION 26
Dot matrix printers are generally more cost effective and cheaper compared to Laser printers.
   A. **True**
   B. False

QUESTION 27
Which of the following is **NOT** an important factor that need to be considered when selecting an application software for a business?
   A. **The developer**
   B. Cost of the software
   C. Learning curve for the staff
   D. Customer support services

QUESTION 28
Which of the following is Not an example of information?
   A. Mark sheet of students
   B. **Number of items sold**
   C. Reports
   D. Pay slip of employees

QUESTION 29
Which type of software is defined as the combination of text, audio, images, animation, or video to produce interactive content"?
   A. Presentation
   B. **Multimedia**
   C. Graphics
   D. Spreadsheet

QUESTION 30
What is the name given to the table which shows possible combinations of inputs for an output?
   A. **Truth table**
   B. Flipflop Table
   C. Gate table

D. System circuit table

QUESTION 31
The following are characteristics of programming languages
    I.   Require translation
   II.   Machine dependent
 III.   Easier to read, write and maintain
 IV.   Fast in execution
  V.   Portable
Select three characteristics of high-level languages?
    A. I, II & III
    B. 1, II & IV
    C. I, III & IV
    D. I, III & V

QUESTION 32

Which of the following is **NOT** a primary storage?
    A. Read only memory
    B. Random access memory
    C. Caçhe memory
    D. **Flash disk**

QUESTION 33
A _____ is the interconnection of information technology devices within the range of an individual person, typically within a range of 10 meters.
    A. local area network (LAN)
    B. personal area network (PAN)
    C. campus area network (CAN)
    D. metropolitan area network (MAN)

QUESTION 34
Select a statement that **BEST** describes the function of a network operating system.
    A. To transfer control automatically from one job to the next job without intervention of the computer operator.
    B. To create and manage network user accounts.
    C. To processes data and events that have critically defined time constraints
    D. To allow smartphones, tablets, PDAs and other handheld devices to run applications and programs.

QUESTION 35
Which of the following is a disadvantage of computers?
    A. Enhance productivity
    B. Reduce operation costs
    C. Reduce storage space
    D. Require skilled operators

QUESTION 36
The following are transmission media. Identify the odd one out.
    A. Coaxial
    B. Bluetooth
    C. Twisted pair
    D. Optical fibre

QUESTION 37

Which of the following is **NOT** a feature of an operating system?
- A. Security Management
- B. Process Management
- C. Storage and Memory Management
- **D. Preparing standard documents**

QUESTION 38

Which one of the following is **NOT** a type of malware?
- A. Viruses
- B. Ransomware
- **C. Spam**
- D. Spyware

QUESTION 39

Among the following, which one is **NOT** a networking device?
- A. Hub
- B. Modem
- **C. Glove**
- D. Bridge

QUESTION 40

An output device is a piece of computer hardware that receives data from a computer and then translates that data into another form. Output is either hard copy or soft copy.
Which of the following output devices produces hard copy of output?
- A. Speaker
- **B. Plotter**
- C. Monitor
- D. Projector

QUESTION 41

A software program that allows a user to locate, access, and display web pages is known as?
- **A. web browser**
- B. world wide web
- C. electronic mail
- D. hypermedia

QUESTION 42

Computers can be classified based on type. Which of the following computers are in this class?
- A. Microcomputers
- B. General purpose
- **C. Hybrid**
- **D.** Dedicated

QUESTION 43

In computing, acronym URL stands for?
- A. Uniform Resource List
- B. Uniform Requirement Location
- **C. Uniform Resource Locator**
- D. Uniform Registration Language

QUESTION 44

Secondary storage is more expensive in terms of cost per byte than primary storage.
- A. True
- **B. False**

QUESTION 45

Which one of the following is **NOT** a service offered by an internet service provider (ISP)?
- A. Internet access
- B. Web hosting

C. Email services
D. Computer repairs

QUESTION 46
Which one of the following is **NOT** a service provided by an operating system?
    A. Program Execution
    B. Manipulation of File System
    C. Error Detection and Handling
    D. Preparing financial statements

QUESTION 47
The following are some common web browsers for mobile devices, **EXCEPT?**
    A. Safari
    B. Chrome
    C. Opera
    D. DOS

QUESTION 48

Which of the following is a characteristic of a wide area network?
    A. Serves a single organization
    B. File transfer and recovery are more manageable
    C. It has very few data transmission errors.
    D. **Data transmission speed is sometimes slow or even very fast**

QUESTION 49
Which one of the following is **NOT** an operating system?
    A. Windows
    B. Sage
    C. Linux
    D. Dos

QUESTION 50
A secondary storage device is also known as an auxiliary storage device or external storage. Which of the is NOT a secondary storage device?
    A. Digital versatile disk (DVD)
    B. Read only memory
    C. Zip drive
    D. Blu-ray

QUESTION 51
Which of the following is **NOT** a type of cloud?
    A. Public
    B. Private
    C. Hybrid
    D. Intranet

QUESTION 52
Which of the following is **NOT** an application software?
    A. Excel
    B. AutoCAD
    C. QuickBooks
    D. Unix

QUESTION 53
_____is a technology of connecting computers together in a local area network or LAN.
    A. Ethernet
    B. Network
    C. Ecommerce

D.   World wide web.

QUESTION 54

A _____is a web-based platform that collects information from different sources into a single user interface and presents users with the most relevant information for their context.
   A.   portal
   B.   blog
   C.   usernet
   D.   vblog

QUESTION 55

Which of the following allow**s** the expansion cards to fit parallel to the motherboard, usually to maintain a small form factor?
   A.   Daughterboard
   B.   Motherboard
   C.   System unit
   D.   Expansion slot

QUESTION 56

Which of the following type of interface is only suitable for professional users?
   A.   Graphical User Interface(GUI)
   B.   Menu Drive
   C.   Command Line Interface(CLI)
   D.   Form based

QUESTION 57

Which one of the following is **NOT** a computer port?
   A.   Serial
   B.   USB
   C.   HDMI
   D.   Monitor

QUESTION 58

What is describe as a private computer network that functions over a public network and usually utilizes data encryption to provide secure access to something?
   A.   Virtual private network (VPN)
   B.   Personal area network (PAN)
   C.   Local area network (LAN)
   D.   Wide area network (WAN)

QUESTION 59

____ is a protocol that transfer files from a local computer to a remote computer.
   A.   HTTP
   B.   FTP
   C.   UDP
   D.   TCP

QUESTION 60

One of the components below is **NOT** housed in the system unit. Which one?
   A.   DVD drive
   B.   Power supply unit,
   C.   Keyboard
   D.   CPU fan

QUESTION 61

Email is still among the most widely used communication tools in the workplace today.
Which of the following is an advantage of email for internal communications?
   A.   Email is accessible from anywhere
   B.   Email lacks a personal touch.
   C.   Email should be kept short and brief.
   D.   Email requires timely responses

QUESTION 62

A computer _____ is any loophole that can harm a user's information on a computer.
- A. threat
- B. risk
- **C. vulnerability**
- D. bug

QUESTION 63

Which one of the following is NOT an important characteristic of information?
- A. Complete
- **B. Flexible**
- C. Concise
- D. Reliable

QUESTION 64

What is the binary equivalent of the following octal number 637?
- **A. 110011111**
- B. 11011111
- C. 1111110
- D. 111011110

QUESTION 65

What is the of the process of reducing the type of a file on disk using different algorithms and mathematical calculations?
- A. Encryption
- B. Disk clean up
- C. Disk Partitioning
- **D. Compression**

QUESTION 66

Which of the following is **NOT** an instant messaging application?
- A. Facebook Messenger
- B. Microsoft Teams
- C. WhatsApp Messenger
- **D. Opera Mini**

QUESTION 67

Identify the device which is used to connect and transfer data and information between computers, routers, switches and storage area networks.
- A. Modem
- B. Switch
- **C. Network cable**
- **D.** Repeater

QUESTION 68

What is the result in the truth table using the logical and operator with two inputs true AND false.
- A. True
- **B. False**

QUESTION 69

Which of the following is NOT a computer crime?
- A. Child pornography
- B. Cracking
- **C. Misusing computer time**
- D. Vishing

QUESTION 70

Identify among the following a component which is **NOT** part of the processor
- A. Register
- B. Control unit

C. **Port**
D. Bus

QUESTION 71

Which of the following statements BEST describes cyber security threat?
- A. **It refers to any possible malicious attack that seeks to unlawfully access data, disrupt digital operations or damage information.**
- B. It is any incident that results in unauthorized access to computer data, applications, networks or devices.
- C. It involves the use of security policies and processes to reduce the overall risk.
- D. It is a safeguard or countermeasure prescribed for an information system or an organization, which is designed to protect the confidentiality.

QUESTION 72

Which one of the following is NOT a type of computer keyboard?
- A. Portable
- B. Ergonomic
- C. Wireless
- D. **Optical**

QUESTION 73

What is defined as the method of collecting raw data and translating it into usable information?
- A. Extraction
- B. **Data processing**
- C. Data input
- D. Information

QUESTION 74

_____ provides the necessary instructions for how a device communicates with the other computer hardware.
- A. **Firmware**
- B. Software
- C. User
- D. Input

QUESTION 75

A Spam is any unsolicited messages that is sent by email. These emails are usually sent in bulk batches and therefore may drain an organisation's time since employees have to constantly sift through and delete them to get to actual important emails. The methods listed below can be used to stop spam emails, except?
- A. Set Up Spam Filters
- B. Unsubscribe to stop receiving marketing emails
- C. **Protecting emails using passwords**
- D. Don't Respond to Spam Emails

QUESTION 76

What name is given to the process of starting a machine which was initially off?
- A. Warm booting
- B. **Cold booting**
- C. Restarting
- D. POST

QUESTION 77

Computers have changed the way we work. They play an important role in every field. Which of the following is **NOT** an important application of computers in education?
- A. Computers are a brilliant aid in teaching.
- B. **Computers have changed how teaching is done.**
- C. Computer, hard drives and storage devices are an excellent way to store data
- D. Quick communication between students, teachers and parents

QUESTION 78

What is the decimal equivalent of the following binary number 11001011?

A. **203**
B. 313
C. 302
D. 3023

QUESTION 79

In the context of networking, a_____refers to any group of users, workstations, devices, printers, computers and database servers that share different types of data via network resources.
  A. Proxy
  B. Internet
  C. Web
  D. Domain

QUESTION 80

The following are basic actions done using a computer mouse, EXCEPT?
  A. Right click
  B. Scroll
  C. Typing
  D. Drag & drop

QUESTION 81

One of the major services offered through internet is communication. The following are communication services, Except?
  A. Electronic Mail
  B. Web hosting
  C. Newsgroup
  D. Instant Messaging

QUESTION 82

A security exploit is a code that takes advantage of a software vulnerability or security flaw.
  A. True
  B. False

QUESTION 83

Which task is activated when a user holds down CTRL key and then presses P on the keyboard?
  A. Paste
  B. Print
  C. Undo
  D. Select all

QUESTION 84

_____is a message that is sent from one person to another over the Internet by the use of applications
  A. Simple mail
  B. Junk mail
  C. Electronic mail
  D. Instant messaging

QUESTION 85

Which one of the following is a type of a computer monitor?
  A. Liquid crystal display (LCD)
  B. Mechanical
  C. Optical
  D. Ergonomic

QUESTION 86

Identify the computer hardware that capture data that originates in audio form
  A. Headset
  B. Gloves

C. **Microphone**
D. Speaker

QUESTION 87
A _____ is a set of rights and restrictions that can be associated with a user or group of users.
    A. security profile
    B. user credential
    C. user account
    D. security policy

QUESTION 88
Crackers are people who hack a system by breaking into it and violating it with some bad intentions.
Which of the following is **NOT** a good reason for malicious activities?
    A. Data theft
    B. Data manipulation
    C. **To proof themselves**
    D. Spreading malware

QUESTION 89
A microcomputer functioning as a terminal, that can process data files stored on mass storage devices is known as _____ terminal.
    A. Dumb
    B. Intelligent
    C. Workstation
    D. Server

QUESTION 90
Why are application software such as word processing and spreadsheets also known as productivity software?
    A. They enable end users to complete their tasks faster
    B. They are easy to use
    C. They can be duplicated faster
    D. They increase the production of manufactured goods.

QUESTION 91
Which part of the central processing unit is responsible for controlling the transfer of data and instructions among other units of a computer?
    A. Arithmetic unit
    B. Register
    C. **Control unit**
    D. Logic unit

QUESTION 92
Amongst the following computers, which one is used to carry out complex calculations in a very short time, has more than one processor and has very high processing speed?
    A. Minicomputer
    B. Micro computer
    C. Mainframe
    D. Super computer

QUESTION 93
Which of the following memory is best described as a chip-based computer component that makes retrieving data from the computer's memory more efficient?
    A. Cache memory
    B. Read only memory
    C. Flash memory
    D. Hard disk

QUESTION 94

There are several types of security controls that can be implemented to protect hardware, software, <u>networks</u>, and data from actions and events that could cause loss or damage. Among the Physical security controls, **EXCEPT**?

    A. Perimeter fencing
    B. Guards
    C. Firewall
    D. Biometric access control

QUESTION 95

Computer security refers to protecting and securing computers and their related data, networks, software, hardware from unauthorized access, misuse, theft, information loss, and other security issues.
Which of the following is NOT a goal of computer security?

    A. Confidentiality
    B. Integrity
    C. Availability
    D. Compatibility

QUESTION 96

The countermeasure of scrambling of data in transit or at rest is called?

    A. Encryption
    B. Cryptography
    C. Decryption
    D. Compression

QUESTION 97

Which one of the following is NOT a feature of the fourth-generation computers?

    A. Hand-held computer devices became more popular and affordable
    B. Storage of memory and other storage devices has increased in big amount.
    C. Technology used was integrated circuit.
    D. Processing power or speed has increased enormously.

QUESTION 98

Which networking device that enables a user to share Internet connection with dissimilar networks?

    A. Hub
    B. Router
    C. Gateway
    D. Modem

QUESTION 99

What is name given to a commercial type computer that stores information and provides access to that information across a network known as?

    A. Client
    B. Terminal
    C. Workstation
    D. Server

QUESTION 100

A group of adjacent binary digits that a computer processes as a unit to form a character is known as?

    A. Byte
    B. Field
    C. Bit
    D. File

END