

199/2023

Maximum : 100 marks

Time : 1 hour and 30 minutes

1. Which of the following is not the characteristic of Von Neumann architecture?
 - (A) Computer architecture is based on stored program concept
 - (B) Same physical memory address space is used for storing instructions and data
 - (C) Separate buses are used for transferring data and instructions
 - (D) There is common bus for data and instruction transfer

2. Name of the architecture that is being used in AVR processors:
 - (A) Harward Architecture
 - (B) John Von Neumann Architecture
 - (C) Superscalar Architecture
 - (D) None of the above

3. Which of the following is true?
 - (A) Cache decreases data access time
 - (B) Cache reduces latency
 - (C) Cache improves input output
 - (D) All of the above

4. Cache memory is a _____ memory.
 - (A) DRAM
 - (B) SRAM
 - (C) ROM
 - (D) PROM

5. Expansion for acronym RAID is:
 - (A) Reduced Array of Independent Disks
 - (B) Redundant Array of Indefinite Disks
 - (C) Redundant Ample Independent Disks
 - (D) Redundant Array of Independent Disks

6. A method that allows an input/output (I/O) device to send or receive data directly to or from the main memory, by bypassing the CPU to speed up memory operations is called as:
- (A) Interrupt driven data transfer (B) Serial memory access
(C) Direct memory access (D) All of the above
7. Name the type of bus interconnected system used in computer systems to communicate CPU to memory is called as:
- (A) Expansion bus (B) Local bus
(C) System bus (D) None of the above
8. Which of the following is the characteristics of RISC processor?
- (A) Fewer addressing modes (B) Less number of registers
(C) Multiple instruction size formats (D) All of the above
9. Name the control unit design method used in computer design that uses fixed logic circuits to generate the control signals:
- (A) Hardwired control unit design
(B) Architecture controlled control unit design
(C) Microprogrammed control unit design
(D) None of the above
10. Name of the register in the computer processor which has the address of the next instruction to be executed from memory is:
- (A) Memory buffer register (B) Program counter
(C) Memory data register (D) Instruction register

11. What is the expansion of the abbreviation SIMD related to computer architecture?
- (A) Single Input Stream Multiple Data Stream
 - (B) Single Instruction Stream Multiple Deep Stream
 - (C) Single Input Stream Multiple Deep Stream
 - (D) Single Instruction Stream Multiple Data Stream
12. Which of the following uses optical storage techniques?
- (A) DVD
 - (B) Hard Disk
 - (C) Floppy Disk
 - (D) All of the above
13. Indirect cycle in an instruction execution is related to:
- (A) Fetching of opcode from memory
 - (B) Fetching of operand from memory
 - (C) Fetching of data from I/O device
 - (D) None of these
14. The technique used to increase throughput of the computer system, by overlapping the execution of instructions which are independent to each other is called as:
- (A) Multicore processing
 - (B) Super scalar processing
 - (C) Instruction pipelining
 - (D) None of these
15. Which of the following is false?
- (A) DRAM is constructed using volatile memory techniques
 - (B) Hard Disk is constructed using nonvolatile memory techniques
 - (C) Flash is constructed using volatile memory techniques
 - (D) All of the above
16. Name the type computer memory used to quickly accept, store and transfer data and instructions that are being used immediately by the CPU:
- (A) Hard disk
 - (B) SSD
 - (C) DVD
 - (D) None of the above
17. What is the expansion of the acronym LCD?
- (A) Linear Crystal Display
 - (B) Linear Counter Display
 - (C) Liquid Counter Display
 - (D) Liquid Crystal Display

18. A way of storing the same data in different places on multiple hard disks or solid-state drives (SSDs) to protect data in the case of a drive failure is called as:
- (A) Redundant array of independent disks (B) Hard Disk Drive
(C) Serial AT attachment (D) Solid State Drive
19. Which of the following memory is based on flash memory concept?
- (A) Hard disk (B) Solid state drive
(C) Magnetic tape (D) Digital versatile Disk
20. Applications of interrupt in computer system is:
- (A) To handle hardware failures
(B) Transfer data between CPU and input output device
(C) For calling various operating services to other software application
(D) All of the above
21. What distinguishes a patent from a trademark in particular?
- (A) A trademark protects brand names and logos, while a patent protects inventions and innovations
(B) A trademark protects literary works, while a patent protects industrial designs
(C) A trademark protects inventions, while a patent protects brand names
(D) A trademark protects logos, while a patent protects artistic creations
22. In terms of information rights, what does the term digital sovereignty mean:
- (A) The right to access the internet freely and without restrictions
(B) The right to remain anonymous online
(C) The ability of a nation to control and protect its digital infrastructure and data
(D) The right to resell digital products without restrictions

23. What does filter bubble mean when referring to the internet and morality?
- (A) A protective measure against online harassment
 - (B) A practice of excluding certain content from search engine results
 - (C) A situation where individuals are only exposed to information and opinions that align with their existing beliefs
 - (D) A type of online advertising strategy
24. In B2B e-commerce, what does the term reverse auction refer to:
- (A) An auction where buyers compete to offer the highest price for a product or service
 - (B) An auction where sellers compete to offer the lowest price for a product or service
 - (C) An auction where both buyers and sellers negotiate prices
 - (D) An auction where the final price is determined by an AI algorithm
25. What does VoIP mean in the context of IT and communication?
- (A) Voice of Internet Protocol
 - (B) Virtual Office Information Processing
 - (C) Voice over Internet Protocol
 - (D) Visual Output information processing
26. Which IT communication technology is frequently used for contactless payments and keyless entry systems and allows the exchange of data between devices over short distances?
- (A) Near Field Communication
 - (B) Radio-Frequency Identification
 - (C) Domain Name System
 - (D) Virtual private Network
27. What does the safe sharing of patient data between various healthcare systems that supports coordinated treatment go by?
- (A) Health Information Exchange
 - (B) Electronic Health Record
 - (C) Telemedicine
 - (D) Radiology information system

28. What purpose do educational technology tools serve primarily in the classroom?
- (A) To replace teachers with automated systems
 - (B) To enhance the learning experience and improve teaching efficiency
 - (C) To reduce access to educational resources
 - (D) To increase the cost of education
29. What is the role of a state's IT policy in promoting digital inclusion?
- (A) To limit access to government services
 - (B) To ensure that all citizens have equal access to technology and digital resources
 - (C) To encourage technology monopolies
 - (D) To tax digital devices heavily
30. What is net neutrality in the context of internet freedom?
- (A) The principle that all internet traffic should be treated equally by internet service providers
 - (B) The practice of blocking access to specific websites
 - (C) The requirement for government approval to access the internet
 - (D) The prohibition of using encryption on the internet
31. In the context of professional ethics, what does the term fiduciary duty mean:
- (A) A duty to prioritize personal interests over those of the client
 - (B) A duty to act in the best interests of the client and put their interests first
 - (C) A duty to disclose confidential client information to the public
 - (D) A duty to engage in unethical practices for financial gain
32. Which phrase describes the legal procedure by which the government can take over private property for public use, provided that the property owner receives just compensation?
- (A) Eminent domain
 - (B) Copyright infringement
 - (C) Adverse possession
 - (D) Squatter's rights

33. What kind of liability restricts shareholders' losses to the sum they invested in the business's shares in a joint-stock company or corporation?
- (A) General liability (B) Joint liability
(C) Limited liability (D) Collective liability
34. Which term is used to describe the process of borrowing money to buy securities in online trading?
- (A) Leverage (B) Diversification
(C) Risk management (D) Portfolio optimization
35. What part of business-to-consumer e-commerce involves convincing customers to buy more expensive or improved goods or services at the same time as or after their first purchase?
- (A) Cross-selling (B) Upselling
(C) Abandonment recovery (D) Price comparison
36. How many sub keys are generated from the original 56-bit key in DES algorithm?
- (A) 48 (B) 56
(C) 64 (D) 16
37. Which function is used by 3DES?
- (A) $C = E(K3, D(K2, E(K1, p)))$ (B) $C = E(K3, E(K2, E(K1, p)))$
(C) $C = E(K3, D(K2, E(K3, p)))$ (D) $C = E(K3, E(K2, E(K2, p)))$
38. In UNIX system, which of the following allows two different users to use the same password:
- (A) Process id (B) Salt value
(C) Encryption (D) Shell
39. Which method allows user to select his or her own password and reject non allowable passwords at the time of selecting password?
- (A) Computer generated password (B) Reactive password checker
(C) Proactive password checker (D) None of these

40. "Signature" in Intrusion Detection means:
- (A) Known patterns of malicious data
 - (B) Digital signature used for authentication
 - (C) Firewall
 - (D) Hash value
41. A 'crime ware' is a:
- (A) A program to find malwares
 - (B) Toolkit to develop and deployment of malware
 - (C) Antivirus stored in an IC
 - (D) None of the above
42. Expansion of BHO:
- (A) Browser Helper objects
 - (B) Browser Handling objects
 - (C) Botnet Handling Objects
 - (D) Browser Hidden Object
43. Which is not a symmetric encryption algorithm?
- (A) DES
 - (B) AES
 - (C) RSA
 - (D) Blowfish
44. Caesar cipher uses:
- (A) Transposition
 - (B) Substitution
 - (C) Exponentiation
 - (D) Hoaxes
45. Computer systems under the control of one attacker by installing malware in it and that can be used to attack other systems is known as:
- (A) Bomber
 - (B) Ada
 - (C) Zombie
 - (D) Bastion host
46. Which of the following software is a presentation software?
- (A) Microsoft Word
 - (B) Microsoft Excel
 - (C) Microsoft PowerPoint
 - (D) Microsoft Access

47. What is the keyboard shortcut to insert a new slide in Microsoft PowerPoint presentation?
- (A) Ctrl + N (B) Ctrl + S
(C) Ctrl + M (D) Ctrl + Shift + N
48. Which of the following statements is incorrect about Microsoft Excel charts?
- (A) Data that is arranged in columns or rows on a worksheet can be plotted in a bar chart
(B) A scatter chart has horizontal (x) and a vertical (y) value axis
(C) Pie charts show the size of items in more than one data series
(D) Surface chart is useful when you want to find optimum combinations between two sets of data
49. The file type .csv represents :
- (A) Column separated validated file (B) Comma separated values file
(C) Tab spaced values file (D) Common space value file
50. Let the G10 cell in a excel worksheet contain the formula = \$A3 + \$B3, if we copy the formula to the cell H10 the formula will be :
- (A) \$B3 + \$C3 (B) \$B4 + \$C4
(C) \$A3 + \$B3 (D) \$A4 + \$B4
51. Which of the following is the vector file format?
- (A) gif (B) jpeg
(C) svg (D) png
52. Which feature in Microsoft Word allows to attach some fields in a main document and automatically fills in the filed from a list of recipient information?
- (A) Multiple Printing (B) Merge Letter
(C) Mail Merge (D) Thesaurus
53. Shortcut to display displays the Thesaurus task pane in Microsoft Word is :
- (A) Shift + F7 (B) Ctrl + F7
(C) F7 (D) F8

54. Which session break in Microsoft Word allows us to start a new session in the same page?
- (A) Page Break (B) Same Page Break
(C) Continuous (D) Even Page
55. Which function is used to counts the number of cells that are not empty in a range?
- (A) count (B) countif
(C) counts (D) counta
56. CTRL + Shift + ESC shortcut in Windows is used to :
- (A) Shutdown (B) Open Task Manager
(C) Restart (D) Open Windows Explorer
57. _____ is a text editor or word processor feature that breaks lines between words to adjust them within specified margins.
- (A) Line break (B) Paragraph break
(C) Word Wrap (D) Margin break
58. _____ files are the native file format of Adobe Photoshop.
- (A) adp (B) jpeg
(C) pdf (D) psd
59. Which statement is incorrect about Taskbar in Windows 11?
- (A) We can hide or display taskbar item
(B) We cannot change Taskbar icons alignment
(C) We can automatically hide the taskbar
(D) We can open Task Manager using taskbar
60. What is the shortcut to open windows explorer application in Microsoft Windows?
- (A) CTRL + Shift + w (B) Windows Logo Key + e
(C) Windows Logo Key + w (D) CTRL + Shift + e
61. Which tool in Photoshop is used to remove unwanted parts of an image?
- (A) Clone Stamp Tool (B) Burn Tool
(C) Patch Tool (D) Crop Tool

62. What is image mapping in Photoshop?
- (A) A technique to create 3D images from 2D images
 - (B) A method for enhancing image resolution and clarity
 - (C) A process of linking different regions of an image to specific URLs or actions
 - (D) A way to add special effects and filters to an image
63. What is the purpose of creating an artistic background in Photoshop?
- (A) To enhance the resolution and clarity of an image
 - (B) To remove unwanted elements from a photo
 - (C) To add visual interest and creativity to a design
 - (D) None of the above
64. The Photoshop tool is used to lighten the pixel in an image is :
- (A) Smudge Tool
 - (B) Dodge Tool
 - (C) Lasso Tool
 - (D) Gradient Tool
65. How can you apply various artistic effects to a background layer in Photoshop?
- (A) By duplicating the layer multiple times
 - (B) By using the “Liquify” filter for distortion
 - (C) By adjusting the “Brightness/Contrast” settings
 - (D) By applying artistic filters from the “Filter Gallery”
66. What does the “Distort” filter in Photoshop allow you to do?
- (A) Add various lighting effects to the image
 - (B) Adjust the sharpness and clarity of the image
 - (C) Warp and transform the image using different presets
 - (D) Apply different brushstrokes to the image
67. Which tool in Photoshop is used to define image mapping hotspots?
- (A) Marquee Tool
 - (B) Lasso Tool
 - (C) Magic Wand Tool
 - (D) Slice Tool

68. What does the “Clone Stamp Tool” do in photo retouching?
- (A) Duplicate selected area of an image and paint the area over another part of an image
 - (B) Adjusts the exposure and brightness levels of the image
 - (C) Applies artistic filters and effects to the image
 - (D) All of the above
69. When resizing an image in Adobe Photoshop, which option is generally recommended to maintain image quality?
- (A) “Image Size” under the “Image” Menu
 - (B) “Canvas Size” under the “Image” Menu
 - (C) “Free Transform” under the “Edit” Menu
 - (D) “Transform” under the “Edit” Menu
70. What is the primary function of the Eyedropper Tool in Photoshop?
- (A) To create complex selections in an image
 - (B) To add text and captions to an image
 - (C) To measure the size and dimensions of objects
 - (D) To sample and pick colors from an image
71. What is the purpose of an IP address?
- (A) To uniquely identify a device on a network
 - (B) To determine how to forward data to the correct destination
 - (C) To encrypt data during transmission
 - (D) Both (A) and (B)
72. IPv6 has a more complex alphanumeric format, and it uses how many bits address:
- (A) 32 bits
 - (B) 64 bits
 - (C) 128 bits
 - (D) 256 bits

73. A WHOIS query in the context of domain names is used to find out:
- (A) The web hosting provider of a website
 - (B) The availability of a domain name for registration
 - (C) The details related to a domain name or IP address
 - (D) The SSL certificate details of a website
74. Specialized software that stores, processes, and serves web content to clients that request it over the Internet:
- (A) Web Servers
 - (B) Web Browsers
 - (C) Domain Names
 - (D) URL's
75. MIME headers are commonly used in which protocol(s)?
- (A) In HTTP protocol only
 - (B) In email protocol only
 - (C) In email protocols and HTTP protocols
 - (D) None of the above
76. Which HTML tag is used to define a cell within a table row to hold data?
- (A) <td>
 - (B) <tr>
 - (C) <table-row>
 - (D) Both (A) and (B)
77. With the form tag, which attribute is used to specify the server-side script that will process the form data?
- (A) Name
 - (B) Method
 - (C) Target
 - (D) Action
78. Which of the following is an empty tag in HTML?
- (A) <p>
 - (B)

 - (C) Both (A) and (B)
 - (D) None of the above
79. Which tag is used to embed another document within the current HTML document?
- (A) Anchor tag
 - (B) iframe
 - (C) Link
 - (D) None of the above

80. What type of language is JavaScript?
- (A) Compiled language
 - (B) Assembly language
 - (C) Machine language
 - (D) Interpreted language
81. What is the purpose of the addEvent Listener method in JavaScript?
- (A) It adds a new element to the HTML document
 - (B) It creates a new event in the DOM
 - (C) It registers an event handler for a specified event on an element
 - (D) It defines a new event type
82. What is the purpose of form validation in web development?
- (A) Enhancing user interface design
 - (B) Ensuring secure data transmission
 - (C) Validating user inputs for accuracy and completeness
 - (D) Displaying ads on the web page
83. How can you prevent a form from submitting when validation fails in JavaScript?
- (A) By returning false in the onsubmit event handler
 - (B) By setting the validate attribute to false in the form tag
 - (C) By returning true in the onsubmit event handler
 - (D) By using the no Submit CSS class
84. Which style sheet is ideal when the style is applied to many pages?
- (A) Internal
 - (B) Inline
 - (C) External
 - (D) None of the above
85. Which CSS selector is used to specify a style for multiple types of elements throughout your HTML document?
- (A) element
 - (B) class
 - (C) #id
 - (D) Both (B) and (C)
86. When the CPU needs to access memory, it first examines
- (A) RAM
 - (B) ROM
 - (C) CACHE
 - (D) SSD

SPACE FOR ROUGH WORK

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