

Computer Science MCQS — MCQs

Prepared by DocMCQs

Pages 1 to 50

Q1: Which keyboard shortcut is used to copy selected text?

- A) Ctrl + X
- B) Ctrl + V
- C) Ctrl + C
- D) Ctrl + Z

Correct: Ctrl + C

Explanation: Ctrl + C is the shortcut for copying selected text.

Q2: The silicon chip used for data processing in a computer is known as the:

- A) Hard Disk
- B) RAM
- C) Monitor
- D) Microprocessor

Correct: Microprocessor

Explanation: The microprocessor is the silicon chip that processes data in a computer.

Q3: Which keyboard shortcut is used to apply subscript formatting to selected text in Microsoft Word?

- A) Ctrl + =
- B) Ctrl + Shift + +

C) Ctrl + Shift + =

D) Alt + =

Correct: Ctrl + =

Explanation: Ctrl + = applies subscript formatting in MS Word.

Q4: What is the default file extension of a Microsoft Word document?

A) .txt

B) .xls

C) .docx

D) .pptx

Correct: .docx

Explanation: The default file extension for MS Word documents is .docx.

Q5: Which language is primarily used for creating web pages?

A) C++

B) HTML

C) Python

D) Java

Correct: HTML

Explanation: HTML (HyperText Markup Language) is the primary language for creating web pages.

Q6: The tool in MS Word that allows users to send letters or documents to many contacts is called:

A) Mail Merge

B) Email

C) Data Source

D) Address Book

Correct: Mail Merge

Explanation: Mail Merge in MS Word enables sending personalized documents to multiple recipients.

Q7: ADA is a:

A) Computer Virus

B) Operating System

C) Programming Language

D) Software Company

Correct: Programming Language

Explanation: ADA is a structured programming language designed for high-reliability applications.

Q8: Which of the following file formats can be inserted into a PowerPoint presentation?

A) JPG

B) GIF

C) WAV

D) All of these

Correct: All of these

Explanation: PowerPoint supports inserting JPG, GIF, and WAV files for images, animations, and audio.

Q9: Which Microsoft Office application is commonly used for creating flowcharts and presentations?

A) MS Excel

- B)** MS Word
- C)** MS PowerPoint
- D)** MS Access

Correct: MS PowerPoint

Explanation: MS PowerPoint is used for creating flowcharts and presentations.

Q10: What is the default file name when you create a new workbook in Microsoft Excel?

- A)** NewBook1
- B)** Excel1
- C)** Sheet1
- D)** Book1

Correct: Book1

Explanation: A new Excel workbook is named 'Book1' by default.

Q11: Which keyboard shortcut is used to apply subscript formatting to selected text in Microsoft Word?

- A)** Ctrl + =
- B)** Ctrl + Shift + +
- C)** Ctrl + Shift + =
- D)** Alt + =

Correct: Ctrl + =

Explanation: Ctrl + = applies subscript formatting in MS Word.

Q12: What is the default file extension of a Microsoft Word document?

- A)** .txt

- B)** .xls
- C)** .docx
- D)** .pptx

Correct: .docx

Explanation: The default file extension for MS Word documents is .docx.

Q13: Which language is primarily used for creating web pages?

- A)** C++
- B)** HTML
- C)** Python
- D)** Java

Correct: HTML

Explanation: HTML (HyperText Markup Language) is the primary language for creating web pages.

Q14: The tool in MS Word that allows users to send letters or documents to many contacts is called:

- A)** Mail Merge
- B)** Email
- C)** Data Source
- D)** Address Book

Correct: Mail Merge

Explanation: Mail Merge in MS Word enables sending personalized documents to multiple recipients.

Q15: ADA is a:

- A)** Computer Virus

- B)** Operating System
- C)** Programming Language
- D)** Software Company

Correct: Programming Language

Explanation: ADA is a structured programming language designed for high-reliability applications.

Q16: Who is known as the Father of the Computer?

- A)** Alan Turing
- B)** Charles Babbage
- C)** Bill Gates
- D)** Steve Jobs

Correct: Charles Babbage

Explanation: Charles Babbage is considered the Father of the Computer for designing the Analytical Engine.

Q17: The process that produces results of processed data for getting useful information is known as:

- A)** Control
- B)** Storage
- C)** Processing
- D)** Output

Correct: Output

Explanation: Output is the process of presenting processed data as useful information.

Q18: A computer that has more than one processor is called:

- A)** Uniprocessor

- B) Multiprocessor
- C) Microprocessor
- D) Minicomputer

Correct: Multiprocessor

Explanation: A multiprocessor computer has multiple processors for enhanced performance.

Q19: What is indentation in MS Excel?

- A) Merging two or more cells
- B) Changing text direction
- C) Moving cell content away from the cell border
- D) Styles Dialog Box

Correct: Moving cell content away from the cell border

Explanation: Indentation in Excel shifts cell content away from the border for formatting.

Q20: What is the best definition of the Internet?

- A) A software used to play games
- B) A local area network in an office
- C) A global computer network connecting millions of devices
- D) A large computer used in universities

Correct: A global computer network connecting millions of devices

Explanation: The Internet is a global network connecting millions of devices for data sharing.

Q21: Which of the following file extensions is commonly used for compressing files?

- A) .docs
- B) .cmp

C) .zip

D) .clp

Correct: .zip

Explanation: The .zip extension is widely used for compressing files.

Q22: Who among the following is the founder of Microsoft Corporation?

A) Jimmy Wales

B) Bill Gates

C) Paul Allen

D) Both B & C

Correct: Both B & C

Explanation: Bill Gates and Paul Allen co-founded Microsoft Corporation.

Q23: Which of the following is the most common type of networking connector used in PCs' network interface cards?

A) RJ-45

B) USB

C) HDMI

D) VGA

Correct: RJ-45

Explanation: RJ-45 is the standard connector for Ethernet cables in network interface cards.

Q24: Microsoft PowerPoint is used for making:

A) Spreadsheets

B) Databases

C) Presentations

D) Text Documents

Correct: Presentations

Explanation: PowerPoint is designed for creating slideshow presentations.

Q25: Which of the following is a database management system?

A) MS Word

B) MS PowerPoint

C) MS Excel

D) MS Access

Correct: MS Access

Explanation: MS Access is a database management system in the Microsoft Office suite.

Q26: Which key is used to start the Slide Show from the beginning in PowerPoint?

A) F2

B) F5

C) F7

D) Esc

Correct: F5

Explanation: F5 starts the PowerPoint slide show from the first slide.

Q27: Which technology was used in third-generation computers?

A) Vacuum Tubes

B) Transistors

C) Integrated Circuits (ICs)

D) Microprocessors

Correct: Integrated Circuits (ICs)

Explanation: Third-generation computers (1960s-1970s) used integrated circuits for improved performance.

Q28: What does HTTP stand for?

- A) Hyper Tool Transfer Protocol
- B) HyperText Transfer Protocol
- C) High Text Transfer Protocol
- D) Hyperlink Transfer Protocol

Correct: HyperText Transfer Protocol

Explanation: HTTP stands for HyperText Transfer Protocol, used for web data transfer.

Q29: The computer that processes both analog and digital is called:

- A) Analog computer
- B) Digital computer
- C) Hybrid computer
- D) Mainframe computer

Correct: Hybrid computer

Explanation: A hybrid computer processes both analog and digital data.

Q30: Who is known as the Father of the Computer?

- A) Alan Turing
- B) Charles Babbage
- C) Bill Gates
- D) Steve Jobs

Correct: Charles Babbage

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Explanation: Charles Babbage is considered the Father of the Computer for designing the Analytical Engine.

Q31: The process that produces results of processed data for getting useful information is known as:

- A) Control
- B) Storage
- C) Processing
- D) Output

Correct: Output

Explanation: Output is the process of presenting processed data as useful information.

Q32: A computer that has more than one processor is called:

- A) Uniprocessor
- B) Multiprocessor
- C) Microprocessor
- D) Minicomputer

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Explanation: A multiprocessor computer has multiple processors for enhanced performance.

Q33: What is indentation in MS Excel?

- A) Merging two or more cells
- B) Changing text direction
- C) Moving cell content away from the cell border
- D) Styles Dialog Box

Correct: Moving cell content away from the cell border

Explanation: Indentation in Excel shifts cell content away from the border for formatting.

Q34: Which of the following is not character spacing?

- A) Expanded
- B) Raised
- C) Condensed
- D) Both A & C

Correct: Raised

Explanation: Raised refers to vertical positioning, not character spacing like expanded or condensed.

Q35: In Microsoft Excel, a formula always starts with which symbol?

- A) =
- B) +
- C) \$
- D) @

Correct: =

Explanation: Excel formulas begin with the equals sign (=) to indicate a calculation.

Q36: What is the bar called that appears at the topmost line of a window, displaying the name of the document or program?

- A) Menu Bar
- B) Status Bar
- C) Title Bar
- D) Tool Bar

Correct: Title Bar

Explanation: The title bar displays the document or program name at the top of a window.

Q37: You cannot close MS Word application by:

- A) Choosing File menu then Exit submenu
- B) Press Alt + F4
- C) Click X button on title bar
- D) From File menu choose Close submenu

Correct: From File menu choose Close submenu

Explanation: The Close submenu closes the document, not the entire MS Word application.

Q38: In MS Excel, _____ represents the address of the active cell.

- A) Name Box
- B) Title Bar
- C) Formula Bar
- D) Status Bar

Correct: Name Box

Explanation: The Name Box in Excel shows the address of the currently active cell.

Q39: Which keyboard shortcut is used to switch between open applications in Windows 10?

- A) Ctrl + Tab
- B) Alt + F4
- C) Alt + Tab
- D) Shift + Esc

Correct: Alt + Tab

Explanation: Alt + Tab allows switching between open applications in Windows.

Q40: In MS Word 2016 the Zoom is placed on:

- A) View tab
- B) Home tab
- C) Status bar
- D) Both A & C

Correct: Both A & C

Explanation: Zoom controls are available in the View tab and on the Status bar in MS Word 2016.

Q41: The file extension .ppt is used for files created by:

- A) MS Word
- B) MS Excel
- C) MS PowerPoint
- D) MS Access

Correct: MS PowerPoint

Explanation: The .ppt extension is used for PowerPoint presentation files.

Q42: Which keyboard shortcut is used to extend the selection down in a Microsoft Excel worksheet?

- A) Shift + Down Arrow
- B) Ctrl + Shift + Right Arrow
- C) Alt + Down Arrow
- D) Ctrl + Down Arrow

Correct: Shift + Down Arrow

Explanation: Shift + Down Arrow extends the selection downward in Excel.

Q43: MS Word offers different views of a document:

- A) Two
- B) Three
- C) Four
- D) Five

Correct: Five

Explanation: MS Word provides five views: Print Layout, Read Mode, Web Layout, Outline, and Draft.

Q44: Which keyboard shortcut is used to minimize the Excel window?

- A) Ctrl + F8
- B) Ctrl + F9
- C) Ctrl + F10
- D) Ctrl + F11

Correct: Ctrl + F9

Explanation: Ctrl + F9 minimizes the Excel workbook window.

Q45: In Microsoft Excel, sorting data from A to Z is called:

- A) Descending Order
- B) Filtering
- C) Custom Sorting
- D) Ascending Order

Correct: Ascending Order

Explanation: Sorting from A to Z is ascending order in Excel.

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Q46: How many rows are there in a Microsoft Excel worksheet?

- A) 65,536
- B) 1,048,576
- C) 104,857
- D) 16,384

Correct: 1,048,576

Explanation: A standard Excel worksheet has 1,048,576 rows.

Q47: Which of the following is not a valid version of Microsoft Office?

- A) Office 2003
- B) Office 2007
- C) Office 2016
- D) Office Vista

Correct: Office Vista

Explanation: Office Vista is not a valid Microsoft Office version.

Q48: _____ is a predefined set of colors, fonts, and visual effects that you apply to your slides in PowerPoint for a unified, professional look.

- A) Design
- B) Animation
- C) Layout
- D) Theme

Correct: Theme

Explanation: A theme in PowerPoint provides a consistent look with predefined colors, fonts, and effects.

Q49: Which of the following is not character spacing?

- A) Expanded
- B) Raised
- C) Condensed
- D) Both A & C

Correct: Raised

Explanation: Raised refers to vertical positioning, not character spacing like expanded or condensed.

Q50: In Microsoft Excel, a formula always starts with which symbol?

- A) =
- B) +
- C) \$
- D) @

Correct: =

Explanation: Excel formulas begin with the equals sign (=) to indicate a calculation.

Q51: Ctrl + Q is used to:

- A) Remove Paragraph formatting (Line Space and Paragraph Space)
- B) Close Word Application without saving
- C) Print Whole Document without confirmation
- D) Does nothing

Correct: Remove Paragraph formatting (Line Space and Paragraph Space)

Explanation: Ctrl + Q resets paragraph formatting to default in MS Word.

Q52: In MS PowerPoint, the 'On mouse click' option can be used by:

- A) Insert & On mouse click
- B) Format & On mouse click
- C) Transition & On mouse click
- D) None of these

Correct: Transition & On mouse click

Explanation: The 'On mouse click' option is used in the Transitions tab to advance slides.

Q53: If you want to apply the formatting of one page to another without copying the text, which tool should you use?

- A) Copy-Paste
- B) Format Painter
- C) Format Text Box
- D) Page Setup

Correct: Format Painter

Explanation: Format Painter copies formatting from one section to another without copying content.

Q54: The World Wide Web (WWW) is used for:

- A) Sending e-mails
- B) File printing
- C) Accessing and sharing information over the internet
- D) Operating system functions

Correct: Accessing and sharing information over the internet

Explanation: The WWW enables access and sharing of information via websites on the

internet.

Q55: Which category of computer data typically consumes the most memory?

- A) Text
- B) Numbers
- C) Graphics
- D) Symbols

Correct: Graphics

Explanation: Graphics, such as images and videos, require significantly more memory than text or numbers.

Q56: What is the primary function of the Windows Task Manager?

- A) File management
- B) System configuration
- C) Process and resource management
- D) Disk cleanup

Correct: Process and resource management

Explanation: Windows Task Manager monitors and manages running processes and system resources.

Q57: In a LAN (Local Area Network) system, the operation mainly depends on the:

- A) Node
- B) Hub
- C) Server
- D) Ring

Correct: Server

Explanation: The server is central to LAN operations, managing data and resources.

Q58: Which keyboard shortcut is used to change the case of selected text in Microsoft Word?

- A) Ctrl + Shift + A
- B) Shift + F3
- C) Ctrl + F3
- D) Alt + F3

Correct: Shift + F3

Explanation: Shift + F3 cycles through case options (uppercase, lowercase, title case) in MS Word.

Q59: What is a range in Microsoft Excel?

- A) A1
- B) #REF!
- C) B1:B2
- D) 100

Correct: B1:B2

Explanation: A range in Excel refers to a group of cells, such as B1:B2, denoted by a colon.

Q60: The feature of Word that automatically adjusts the amount of space between certain combinations of characters so that an entire word looks more evenly spaced is called:

- A) Spacing
- B) Kerning
- C) Positioning
- D) Scaling

Correct: Kerning

Explanation: Kerning adjusts spacing between characters for better visual alignment.

Q61: What is the primary function of the Windows Task Manager?

- A) File management
- B) System configuration
- C) Process and resource management
- D) Disk cleanup

Correct: Process and resource management

Explanation: Windows Task Manager monitors and manages running processes and system resources.

Q62: In a LAN (Local Area Network) system, the operation mainly depends on the:

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- A) Ctrl + Shift + A
- B) Shift + F3
- C) Ctrl + F3
- D) Alt + F3

Correct: Shift + F3

Explanation: Shift + F3 cycles through case options (uppercase, lowercase, title case) in MS Word.

Q64: What is a range in Microsoft Excel?

- A) A1
- B) #REF!
- C) B1:B2
- D) 100

Correct: B1:B2

Explanation: A range in Excel refers to a group of cells, such as B1:B2, denoted by a colon.

Q65: The feature of Word that automatically adjusts the amount of space between certain combinations of characters so that an entire word looks more evenly spaced is called:

- A) Spacing
- B) Kerning
- C) Positioning
- D) Scaling

Correct: Kerning

Explanation: Kerning adjusts spacing between characters for better visual alignment.

Q66: The process of arranging data in a logical sequence is called:

- A) Filtering
 - B) Grouping
 - C) Sorting
 - D) Formatting
-

Correct: Sorting

Explanation: Sorting arranges data in a specific order, such as ascending or descending.

Q67: MS Word is a type of:

- A) System Software
- B) Programming Software
- C) Utility Software
- D) Application Software

Correct: Application Software

Explanation: MS Word is an application software used for word processing.

Q68: Which protocol provides email facility among different hosts on the internet?

- A) HTTP
- B) SMTP
- C) FTP
- D) SNMP

Correct: SMTP

Explanation: SMTP (Simple Mail Transfer Protocol) enables email communication between hosts.

Q69: Which of the following functions in MS Excel counts the number of cells within a range that meet the given condition?

- A) COUNTIFB
- B) COUNTA
- C) COUNT
- D) COUNTIF

Correct: COUNTIF

Explanation: COUNTIF counts cells in a range that meet a specified condition.

Q70: The intersection of a row and a column in a spreadsheet (e.g., MS Excel) is called a:

- A) Box
- B) Field
- C) Cell
- D) Sheet

Correct: Cell

Explanation: The intersection of a row and column in a spreadsheet is referred to as a cell.

Q71: Which keyboard shortcut is used to create a formula that sums all the cells above the active cell in Excel?

- A) Alt + S
- B) Ctrl + =
- C) Alt + =
- D) Shift + =

Correct: Alt + =

Explanation: Alt + = inserts a SUM formula for the cells above the active cell in Excel.

Q72: _____ is the measurement of the amount of data that can be transmitted over a network at any given time.

- A) Search engines
- B) Web browsers
- C) Email servers
- D) Bandwidth

Correct: Bandwidth

Explanation: Bandwidth measures the data transmission capacity of a network.

Q73: Macros in MS Word are used for:

- A) Formatting text manually
- B) Automating repetitive tasks
- C) Creating tables
- D) Inserting images

Correct: Automating repetitive tasks

Explanation: # MS Word Macros
Macros are mini-programs in MS Word that automate repetitive tasks, like formatting or inserting text blocks with a single click.

Q74: Servers are computers that provide resources to other computers connected to a:

- A) Mainframe
- B) Client
- C) Supercomputer
- D) Network

Correct: Network

Explanation: Network

Q75: Which of the following terms can be used as another name for Digital Marketing?

- A) Online Marketing
 - B) Internet Marketing
 - C) Web Marketing
 - D) All of these
-

Correct: All of these

Q76: Which of the following leads users from multiple sources to a single link or destination?

- A) Landing page
- B) Blog page
- C) page
- D) Contact page

Correct: Landing page

Explanation: # Landing Page FunctionA landing page is designed to receive traffic from various channels (ads, emails, SEO), guiding all visitors to a common action point.

Q77: Which of the following leads to a single link between the host and the destination in a network?

- A) Point-to-point connection
- B) Broadcast connection
- C) Multicast connection
- D) None of these

Correct: Point-to-point connection

Explanation: # Point-to-Point NetworkA point-to-point connection allows direct communication between a single sender and a single receiver, ensuring dedicated data transfer.

Q78: What do we call a group of web pages that are linked together?

- A) Server
- B) Browser
- C) Website
- D) URL

Correct: Website

Explanation: # Linked Web PagesA website is a collection of related web pages hosted under a domain, interconnected via hyperlinks.

Q79: Which one is a type of information technology?

- A) AI (Artificial Intelligence)
- B) Cloud Computing
- C) Zero-Knowledge Proof
- D) All of these

Correct: All of these

Q80: In Excel, which feature was used to convert an Excel worksheet into an HTML file?

- A) Mail Merge
- B) Internet Assistant Wizard
- C) Page Layout Wizard
- D) Table Sort Tool

Correct: Internet Assistant Wizard

Explanation: # Excel HTML ConversionThe Internet Assistant Wizard is a feature used in earlier Excel versions to export worksheets as HTML for web publishing.

Q81: Which tool in MS Office is used to copy and paste character and paragraph formats to existing text?

- A) (A) Format Painter
- B) (B) Paste Special
- C) (C) Text Box
- D) (D) None of these

Correct: (A) Format Painter

Explanation: Format Painter in MS Office is used to copy and paste formatting from one text or paragraph to another.

Q82: The founder of the Mongol Empire was:

- A)** (A) Genghis Khan
- B)** (B) Kublai Khan
- C)** (C) Timur
- D)** (D) Attila the Hun

Correct: (A) Genghis Khan

Explanation: Genghis Khan founded the Mongol Empire in the early 13th century.

Q83: Which of the following print commands should be selected to view the whole document?

- A)** (A) Print Design
- B)** (B) Print Design
- C)** (C) Print All
- D)** (D) Print Preview

Correct: (D) Print Preview

Explanation: "Print Preview" shows how the document will appear before printing.

Q84: The largest producer of electricity in the Islamic world is:

- A)** (A) Kazakhstan
- B)** (B) Uzbekistan
- C)** (C) Saudi Arabia
- D)** (D) Tajikistan

Correct: (C) Saudi Arabia

Explanation: Saudi Arabia is the largest producer of electricity in the Islamic world.

Q85: What do you mean by vertical separation between columns?

- A) (A) Index
- B) (B) Gutter
- C) (C) Margin
- D) (D) None of these

Correct: (B) Gutter

Explanation: The "gutter" is the space between columns in printed or digital content.

Q86: Which of the following is an absolute cell reference?

- A) IA1
- B) \$A\$1
- C) A1
- D) A1

Correct: \$A\$1

Explanation: Absolute cell reference uses the dollar sign (\$) to lock the reference.

Q87: What is the function of Recycle Bin?

- A) (A) Store deleted file
- B) (B) Store corrupt file
- C) (C) Store temporary file
- D) (D) Store document file

Correct: (A) Store deleted file

Explanation: The Recycle Bin temporarily stores deleted files before they are permanently erased.

Q88: A computer program that translates one program instruction at a time into machine language is called:

- A) Compiler
- B) Simulator
- C) Interpreter
- D) CPU

Correct: Interpreter

Explanation: Interpreter translates one instruction at a time into machine language.

Q89: A feature of MS Word that saves the document automatically after a certain interval is:

- A) (A) Auto Update
- B) (B) Auto Recover
- C) (C) Auto Save
- D) (D) None of these

Correct: (C) Auto Save

Explanation: MS Word automatically saves the document at set intervals using the Auto Save feature.

Q90: Which key is used to copy the formula from the above cell:

- A) Ctrl+C
- B) Ctrl+
- C) Ctrl+Apostrophe (')
- D) Ctrl+.

Correct: Ctrl+Apostrophe (')

Explanation: Ctrl+ Apostrophe (') copies formula from the above cell.

Q91: Which of the following print commands should be selected to view the whole document?

- A) (A) Print Design
- B) (B) Print Design
- C) (C) Print All
- D) (D) Print Preview

Correct: (D) Print Preview

Explanation: "Print Preview" shows how the document will appear before printing.

Q92: The largest producer of electricity in the Islamic world is:

- A) (A) Kazakhstan
- B) (B) Uzbekistan
- C) (C) Saudi Arabia
- D) (D) Tajikistan

Correct: (C) Saudi Arabia

Explanation: Saudi Arabia is the largest producer of electricity in the Islamic world.

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- A) (A) Index
- B) (B) Gutter
- C) (C) Margin
- D) (D) None of these

Correct: (B) Gutter

Explanation: The "gutter" is the space between columns in printed or digital content.

Q94: Which of the following is an absolute cell reference?

- A) IA1
- B) \$A\$1
- C) A1
- D) A1

Correct: \$A\$1

Explanation: Absolute cell reference uses the dollar sign (\$) to lock the reference.

Q95: What is the function of Recycle Bin?

- A) (A) Store deleted file
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- B) (B) Auto Recover
- C) (C) Auto Save
- D) (D) None of these

Correct: (C) Auto Save

Explanation: MS Word automatically saves the document at set intervals using the Auto Save feature.

Q98: Which key is used to copy the formula from the above cell:

- A) Ctrl+C
- B) Ctrl+
- C) Ctrl+Apostrophe (')
- D) Ctrl+.

Correct: Ctrl+Apostrophe (')

Explanation: Ctrl+ Apostrophe (') copies formula from the above cell.

Q99: Which shortcut is used to decrease the text font size?

- A) (A) Ctrl+Shift+<
- B) (B) Ctrl+Shift+F
- C) (C) Ctrl+Shift+>
- D) (D) Ctrl+Alt+F

Correct: (A) Ctrl+Shift+<

Explanation: This shortcut decreases the font size in most text editing software.

Q100: Which type of data is used for inserting or placing content from the clipboard into a document?

- A) Deleted data
- B) Repeated data
- C) Existing data
- D) None of these

Correct: Existing data

Explanation: Clipboard content is inserted as existing data.

Q101: Which of the following will happen when data is added to an existing cell?

- A) (A) It will erase the previous content
- B) (B) It will change the address of one memory cell
- C) (C) It will add to the content of the cell
- D) (D) None of these

Correct: (C) It will add to the content of the cell

Explanation: When data is added, it appends to the existing content in the cell.

Q102: In MS Word, superscript and subscript are known as:

- A) Font Style
- B) Font Format
- C) Font Family
- D) Font Effect

Correct: Font Format

Explanation: Superscript and subscript are font formats in MS Word.

Q103: In MS Excel, the standard formula contains:

- A) (A) Label
- B) (B) Numeric value
- C) (C) Both A & B
- D) (D) None of these

Correct: (C) Both A & B

Explanation: Excel formulas can include both labels (text) and numeric values for calculations.

Q104: Tehzeeb-ul-Akhlaq is a journal written by:

- A) (A) Sir Syed Ahmad Khan
- B) (B) Shah Wali Ullah
- C) (C) Abul Kalam Azad
- D) (D) None of these

Correct: (A) Sir Syed Ahmad Khan

Explanation: Tehzeeb-ul-Akhlaq was founded by Sir Syed Ahmad Khan, focusing on social reform and education for Muslims.

Q105: To check spelling and grammar, which key is used in MS Word:

- A) (A) F3
- B) (B) F5
- C) (C) F7
- D) (D) F9

Correct: (C) F7

Explanation: F7 is the shortcut key for checking spelling and grammar in MS Word.

Q106: An error in software or hardware is called a bug. What is the alternative jargon for it?

A) (A) Leech

B) (B) Squid

C) (C) Slug

D) (D) Glitch

Correct: (D) Glitch

Explanation: "Glitch" is a minor malfunction or bug in software or hardware.

Q107: Which of the following is not a term of MS-Excel?

A) (A) Cell

B) (B) Row

C) (C) Column

D) (D) Document

Correct: (D) Document

Explanation: "Document" is not a specific term in MS Excel, whereas Cell, Row, and Column are.

Q108: The extension of MS Excel is:

A) (A) .xls

B) (B) .docx

C) (C) .dbx

D) (D) None of these

Correct: (A) .xls

Explanation: The extension for MS Excel files is .xls for older versions or .xlsx for newer versions.

Q109: By default, the page size of a new document is ____ inches by ____ inches.

- A) (A) 8.5 and 11
- B) (B) 7.5 and 12
- C) (C) 7.5 and 11.5
- D) (D) None of these

Correct: (A) 8.5 and 11

Explanation: The default page size in MS Word is 8.5 inches by 11 inches (Letter size).

Q110: __ is defined as the process of generating analysis and designing documents?

- A) a) Re-engineering
- B) b) Reverse engineering
- C) c) Software re-engineering
- D) d) Science and engineering

Correct: b) Reverse engineering

Explanation: Reverse engineering involves analyzing an existing system to understand its components, architecture, and functionality. This process is often used to create documentation, such as analysis and design documents, which can be used for various purposes like maintenance, improvement, or creating a new system. Differentiating from Other Options: Re-engineering is a broader term that involves modifying an existing system to improve its quality, performance, or maintainability. Software re-engineering is a specific type of re-engineering focused on software systems. Science and engineering are general fields of study and not specific to the process of analyzing an existing system.

Q111: CASE stands for

- A) a) Computer-Aided Software Engineering
- B) b) Control Aided Science and Engineering

C) c) Cost Aided System Experiments

D) d) None of the mentioned

Correct: a) Computer-Aided Software Engineering

Explanation: Computer-Aided Software Engineering (CASE) is a software application used to automate the software development process. It provides tools and support for various stages of software development, including planning, designing, coding, testing, and deployment. CASE tools improve software quality, productivity, and maintainability. Therefore, option a) is the correct answer.

Q112: Define Agile scrum methodology.

A) a) project management that emphasizes incremental progress

B) b) project management that emphasizes decremental progress

C) c) project management that emphasizes neutral progress

D) d) project management that emphasizes no progress

Correct: a) project management that emphasizes incremental progress

Explanation: Incremental: This means building the product in small, manageable chunks called sprints. Each sprint delivers a potentially shippable product increment. Iterative: The process is repeated, with each iteration incorporating feedback and improvements. Focus on Value: The team prioritizes features based on their value to the customer and delivers them in increments. By breaking down the project into smaller, manageable pieces, Agile Scrum allows teams to: Adapt to change: Quickly respond to changing requirements and market conditions. Deliver value early: Provide customers with valuable features sooner rather than later. Improve quality: Continuously inspect and adapt the process to enhance product quality. Increase team collaboration: Foster a collaborative environment where everyone contributes to the project's success. Therefore, option a) project management that emphasizes incremental progress accurately describes Agile Scrum methodology.

Q113: ___ is a software development activity that is not a part of software processes.

A) a) Validation

B) b) Specification

C) c) Development

D) d) Dependence

Correct: d) Dependence

Explanation: Dependence is correctly identified as the option that is not a software development activity. Understanding the Terms Validation: This is a crucial step in software development to ensure that the product meets the specified requirements. It involves testing the software against the original objectives. Specification: This is the process of defining the software requirements in detail. It outlines what the software should do. Development: This is the actual coding and implementation phase of the software. It involves creating the software product. Why Dependence is Different Dependence refers to the relationship between software components or modules. It's a characteristic or attribute of the software, not an action or process involved in creating it. Dependence is essential to understand the software's structure and how changes in one part might affect others, but it's not an active step in the development lifecycle. In essence, while dependence is a critical aspect of software architecture and maintenance, it's not a process or activity undertaken to build the software itself.

Q114: What are the features of Software Code?

- A) a) Simplicity
- B) b) Accessibility
- C) c) Modularity
- D) d) All of the above

Correct: c) Modularity

Explanation: Modularity is a key feature of software code. Modularity means breaking down a complex software system into smaller, independent components or modules. This approach offers several advantages: Reusability: Modules can be reused in different parts of the software or even in other projects. Maintainability: Changes can be made to one module without affecting the entire system. Testability: Individual modules can be tested independently. Understandability: The code becomes easier to understand and manage. While simplicity and accessibility are desirable qualities in software code, they are not always directly achievable or quantifiable features like modularity. Therefore, modularity is the most accurate and comprehensive answer from the given options.

Q115: Who is the father of Software Engineering?

- A) a) Margaret Hamilton
- B) b) Watts S. Humphrey
- C) c) Alan Turing

D) d) Boris Beizer

Correct: b) Watts S. Humphrey

Explanation: His Contributions Software Process Improvement: He was instrumental in developing the Software Process Improvement (SPI) model, which laid the foundation for understanding and managing software development processes. Capability Maturity Model (CMM): Humphrey's work led to the development of the CMM, a framework for assessing and improving software development processes. His contributions have significantly shaped the software industry by emphasizing the importance of disciplined processes and continuous improvement.

Q116: What is Software Engineering?

A) a) Designing a software

B) b) Testing a software

C) c) Application of engineering principles to the design a software

D) d) None of the above

Correct: c) Application of engineering principles to the design a software

Explanation: Software Engineering: An Engineering Approach Software engineering is the systematic application of engineering principles to the development, operation, and maintenance of software. It involves: Design: Creating the blueprint for the software, outlining its structure, components, and functionalities. Development: Writing the actual code based on the design. Testing: Ensuring the software works as intended and meets quality standards. Maintenance: Making changes, improvements, or bug fixes after the software is deployed. Essentially, it's about applying engineering methodologies to create reliable, efficient, and maintainable software systems.

Q117: Software is defined as __

A) a) set of programs, documentation & configuration of data

B) b) set of programs

C) c) documentation and configuration of data

D) d) None of the mentioned

Correct: a) set of programs, documentation & configuration of data

Explanation: Breakdown of the definition: Programs: These are the executable instructions that

the computer follows to perform tasks. Documentation: This includes user manuals, technical specifications, and other written materials that explain how to use and maintain the software. Configuration data: This refers to the data that determines how the software behaves, such as settings, preferences, and database information. Together, these components form a complete software package that can be used to solve specific problems or perform specific functions.

Q118: Which of the following is not the type of queue?

- A) a) Priority queue
- B) b) Circular queue
- C) c) Single ended queue
- D) d) Ordinary queue

Correct: c) Single ended queue

Explanation: Why "Single-ended queue" is not a type of queue? A queue is inherently a double-ended data structure. It has two primary operations: enqueue (adding to the rear) and dequeue (removing from the front). The term "single-ended queue" is a contradiction. If it were single-ended, it would essentially be a stack, not a queue. Therefore, among the given options, single-ended queue is not a valid type of queue. The other options are valid queue types: Priority queue: Elements have priorities, and the highest priority element is dequeued first. Circular queue: The rear and front pointers wrap around to the beginning of the array when they reach the end. Ordinary queue: The standard queue implementation with a front and rear pointer.

Q119: Which of the following tree data structures is not a balanced binary tree?

- A) a) Splay tree
- B) b) B-tree
- C) c) AVL tree
- D) d) Red-black tree

Correct: b) B-tree

Explanation: Why B-trees are not balanced binary trees B-trees are indeed not balanced binary trees. Key difference: While they are balanced, they are not binary trees. Multiple children: Unlike binary trees, which have at most two children per node, B-trees can have multiple children (typically a minimum number defined by the order of the B-tree). Efficiency: B-trees are designed for efficient storage and retrieval of large datasets on disk, where reading and writing data from disk is relatively slow. By allowing multiple children per node, B-trees can reduce the

number of disk accesses required for search, insert, and delete operations. In summary, while B-trees maintain balance properties to optimize performance, they deviate from the strict binary structure of binary trees. The other options: Splay trees, AVL trees, and Red-black trees are all types of balanced binary trees, meaning they have specific rules to maintain balance and ensure efficient operations.

Q120: What is a bit array?

- A) a) Data structure that compactly stores bits
- B) b) Data structure for representing arrays of records
- C) c) Array in which elements are not present in continuous locations
- D) d) An array in which most of the elements have the same value

Correct: a) Data structure that compactly stores bits

Explanation: Efficiency: It's designed to efficiently store boolean values (0 or 1) by utilizing individual bits instead of entire bytes or words. Memory savings: This approach significantly reduces memory usage compared to traditional arrays that store each element as a complete byte or larger data type. Applications: Bit arrays are commonly used in various algorithms and data structures, such as bloom filters, bitmaps, and set representations. Essentially, a bit array is like an array, but instead of storing elements like integers or characters, it stores individual bits.

Q121: Which of the following application makes use of a circular linked list?

- A) a) Recursive function calls
- B) b) Undo operation in a text editor
- C) c) Implement Hash Tables
- D) d) Allocating CPU to resources

Correct: d) Allocating CPU to resources

Explanation: Circular linked lists are particularly well-suited for scenarios where a cyclical or repetitive pattern is involved. In the context of CPU allocation, this is precisely the case. Round-robin scheduling: This is a common algorithm used to allocate CPU time to multiple processes. Circular nature: A circular linked list forms a loop, perfectly representing the cyclic nature of round-robin scheduling. Efficient iteration: The circular structure allows for easy traversal from one process to the next without the need for special end-of-list checks. By maintaining a circular linked list of processes, the operating system can efficiently cycle through them, granting each process a time slice of CPU time in turn. Once the last process is served, the list wraps back to

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the beginning, ensuring fairness and equal opportunity for all processes. Would you li

Q122: Which data structure is based on the Last In First Out (LIFO) principle?

- A) a) Tree
- B) b) Linked List
- C) c) Stack
- D) d) Queue

Correct: c) Stack

Explanation: Explanation: LIFO means the last element added to the stack is the first one to be removed. Imagine a stack of plates. The last plate you put on the stack is the first one you take off. This behavior is essential in many applications, such as function calls, expression evaluation, and backtracking algorithms. Key operations of a stack: Push: Adds an element to the top of the stack. Pop: Removes the top element from the stack. Peek: Returns the top element without removing it. isEmpty: Checks if the stack is empty.

Q123: Which of the following points is/are not true about Linked List data structure when it is compared with an array?

- A) a) Random access is not allowed in a typical implementation of Linked Lists
- B) b) Access of elements in linked list takes less time than compared to arrays
- C) c) Arrays have better cache locality that can make them better in terms of performance
- D) d) It is easy to insert and delete elements in Linked List

Correct: b) Access of elements in linked list takes less time than compared to arrays

Explanation: Access of elements in linked list takes less time than compared to arrays is not true. Explanation: Arrays provide random access to elements. This means you can directly access any element by its index in constant time ($O(1)$). Linked lists provide sequential access to elements. To access a specific element, you need to traverse the list from the beginning, one node at a time. This takes linear time ($O(n)$), where n is the number of elements in the list. Therefore, accessing elements in a linked list is generally slower than in an array. The other options are true: a) Random access is not allowed in a typical implementation of Linked Lists: This is correct. c) Arrays have better cache locality that can make them better in terms of performance: This is true due to the way arrays store elements contiguously in memory. d) It is easy to insert and delete elements in Linked List: This is generally true, especially when compared to arrays, where shifting elements might be required.

Q124: The prefix form of $A - B / (C * D ^ E)$ is?

- A) a) $-A/B * C ^ DE$
- B) b) $-A/BC * ^ DE$
- C) c) $-ABCD * ^ DE$
- D) d) $- / * ^ ACBDE$

Correct: a) $-A/B * C ^ DE$

Explanation: Understanding Prefix Notation In prefix notation, the operator precedes its operands. The order of evaluation is from right to left. Breaking Down the Expression Given the infix expression: $A - B / (C * D ^ E)$ To convert it to prefix, we need to follow these steps: Handle Parentheses: We start with the innermost parentheses: $(C * D ^ E)$ Converting this to prefix: $* ^ CD E$ Handle Division: The expression becomes: $A - B / (* ^ CD E)$ Converting it to prefix: $- A / B * ^ CD E$ Final Prefix Expression: The complete prefix expression is: $-A / B * ^ CD E$ Therefore, the correct prefix form of the given infix expression is $-A / B * ^ CD E$.

Q125: The data structure required for Breadth First Traversal on a graph is?

- A) a) Array
- B) b) Stack
- C) c) Tree
- D) d) Queue

Correct: d) Queue

Explanation: A queue is the essential data structure for Breadth-First Search (BFS) traversal on a graph. Why a Queue? FIFO (First In, First Out) principle: This is crucial for exploring nodes level by level. The first node added to the queue is the first one to be visited. Efficient enqueue and dequeue operations: The queue allows for quick insertion and removal of nodes, which is necessary for BFS. How it works: Enqueue the starting node: Add the initial node to the queue. Dequeue a node: Remove the front node from the queue and visit it. Enqueue neighbors: Add all unvisited neighbors of the dequeued node to the queue. Repeat steps 2 and 3: Continue until the queue is empty. By using a queue, BFS ensures that all nodes at a given depth are visited before moving to the next level, resulting in a breadth-wise exploration of the graph.

Q126: Which of the following statement(s) about stack data structure is/are NOT

correct?

- A)** a) Top of the Stack always contain the new node
- B)** b) Stack is the FIFO data structure
- C)** c) Null link is present in the last node at the bottom of the stack
- D)** d) Linked List are used for implementing Stacks

Correct: b) Stack is the FIFO data structure

Explanation: Stack is the FIFO data structure is the incorrect statement. Explanation: Stack follows the LIFO (Last In, First Out) principle. This means the last element added to the stack is the first one to be removed. FIFO (First In, First Out) is the characteristic of a queue data structure, not a stack. The other options are correct: a) Top of the Stack always contains the new node: This is true, as new elements are added to the top of the stack. c) Null link is present in the last node at the bottom of the stack: This is typically true in a linked list implementation of a stack, where the bottom node points to null to indicate the end of the stack. d) Linked List are used for implementing Stacks: This is a common way to implement stacks.

Q127: What data structure would you mostly likely see in non recursive implementation of a recursive algorithm?

- A)** a) Stack
- B)** b) Linked List
- C)** c) Tree
- D)** d) Queue

Correct: a) Stack

Explanation: A stack is the data structure most likely seen in a non-recursive implementation of a recursive algorithm. Why a Stack? LIFO (Last In, First Out) property: This mirrors the behavior of recursive function calls, where the most recent function call is the first to finish. Simulates function call stack: In recursion, the system implicitly uses a stack to keep track of function calls and their return addresses. A non-recursive implementation can explicitly use a stack to mimic this behavior. How it works: Push function arguments and local variables onto the stack: Before processing a recursive call, store relevant information on the stack. Process the current iteration: Handle the current problem without making recursive calls. Pop values from the stack for the next iteration: Retrieve stored information to simulate returning from a recursive call. By using a stack, you can effectively transform a recursive algorithm into an iterative one, often improving performance and memory efficiency.

Q128: What is the value of the postfix expression 6 3 2 4 + - *?

- A) a) 74
- B) b) -18
- C) c) 22
- D) d) 40

Correct: b) -18

Explanation: Postfix notation evaluates expressions by processing operands first, followed by operators. Given expression: 6 3 2 4 + - * Scan the expression from left to right: 6, 3, 2, 4: These are operands, so we push them onto a stack. +: We encounter an operator. Pop the top two elements from the stack (4 and 2), add them ($4 + 2 = 6$), and push the result (6) back onto the stack. -: We encounter another operator. Pop the top two elements from the stack (6 and 3), subtract them ($3 - 6 = -3$), and push the result (-3) back onto the stack. *: We encounter the last operator. Pop the top two elements from the stack (6 and -3), multiply them ($6 * -3 = -18$), and push the result (-18) back onto the stack. Since we've reached the end of the expression, the final result is the only element left on the stack, which is -18. Therefore, the value of the postfix expression 6 3 2 4 + - * is -18.

Q129: Which data structure is needed to convert infix notation to postfix notation?

- A) a) Tree
- B) b) Branch
- C) c) Stack
- D) d) Queue

Correct: c) Stack

Explanation: LIFO (Last In, First Out) property: This is crucial for handling operators and their precedence. Efficient push and pop operations: The stack allows for quick insertion and removal of operators, which is necessary for the conversion process. How it works: Scan the infix expression from left to right: If an operand is encountered, add it to the postfix expression. If an operator is encountered: While the stack is not empty and the precedence of the top operator is greater than or equal to the precedence of the current operator, pop the top operator from the stack and add it to the postfix expression. Push the current operator onto the stack. When the end of the expression is reached: Pop all remaining operators from the stack and add them to the postfix expression. By using a stack and following these steps, we can effectively convert infix expressions to their postfix equivalents.

Q130: Which of the following is not the application of stack?

- A) a) Data Transfer between two asynchronous process
- B) b) Compiler Syntax Analyzer
- C) c) Tracking of local variables at run time
- D) d) A parentheses balancing program

Correct: a) Data Transfer between two asynchronous process

Explanation: Stacks follow LIFO (Last In, First Out) principle: This means the last element added is the first one to be removed. Data transfer between asynchronous processes requires a FIFO (First In, First Out) structure, where the first element added is the first one to be removed. Queues are the ideal data structure for this purpose, as they adhere to the FIFO principle. Other options: b) Compiler Syntax Analyzer: Stacks are used extensively in compilers for parsing expressions and checking for syntax errors. c) Tracking of local variables at run time: Function calls and their corresponding local variables are managed using stacks. d) A parentheses balancing program: As we discussed earlier, stacks are essential for checking the balance of parentheses in an expression. Therefore, while stacks are crucial for many applications, they are not suitable for data transfer between asynchronous processes.

Q131: The data structure required to check whether an expression contains a balanced parenthesis is?

- A) a) Queue
- B) b) Stack
- C) c) Tree
- D) d) Array

Correct: b) Stack

Explanation: LIFO (Last In, First Out) property: This is crucial for matching opening and closing parentheses. The last opening parenthesis encountered should be the first one to be closed. Efficient push and pop operations: A stack allows for quick insertion (push) and removal (pop) of elements, which is essential for processing the expression character by character. How it works: Iterate through the expression: If you encounter an opening parenthesis (like (or { or [), push it onto the stack. If you encounter a closing parenthesis, pop the top element from the stack. Compare the popped element with the current closing parenthesis. If they don't match, the expression is unbalanced. Check for empty stack at the end: If the stack is empty at the end of the expression, the parentheses are balanced. If the stack is not empty, there are extra opening parentheses, and the expression is unbalanced. By utilizing the stack's LIFO property, we can effectively keep track of the opening parentheses and ensure they are closed

in the correct order.

Q132: Which data structure is used for implementing recursion?

- A) a) Stack
- B) b) Queue
- C) c) List
- D) d) Array

Correct: a) Stack

Explanation: Stack is the data structure used for implementing recursion. Explanation: Recursion involves a function calling itself directly or indirectly. Each time a function is called, a new activation record is created. This record contains information about the function's parameters, local variables, and return address. To keep track of these activation records and ensure proper execution, a LIFO (Last In, First Out) data structure is needed. Stack is the perfect LIFO data structure for this purpose. When a function is called, its activation record is pushed onto the stack. When the function returns, its activation record is popped off the stack. This process allows the system to manage multiple function calls efficiently and correctly.

Q133: What are the disadvantages of arrays?

- A) a) Index value of an array can be negative
- B) b) Elements are sequentially accessed
- C) c) Data structure like queue or stack cannot be implemented
- D) d) There are chances of wastage of memory space if elements inserted in an array are lesser than the allocated size

Correct: d) There are chances of wastage of memory space if elements inserted in an array are lesser than the allocated size

Explanation: There are chances of wastage of memory space if elements inserted in an array are lesser than the allocated size is the correct answer. Explanation: Fixed size: Arrays have a fixed size, which means you need to specify the number of elements it can hold when you declare it. Memory allocation: The system allocates a contiguous block of memory for the array based on the specified size. Wastage: If you only need to store fewer elements than the allocated size, the remaining memory space in the array goes unused, leading to memory wastage. Other options: a) Index value of an array can be negative: This is incorrect. Array indices typically start from 0 and go up to the length of the array minus 1. Negative indices are not valid. b) Elements are sequentially accessed: This is a characteristic of arrays, not a

disadvantage. Sequential access means elements can be accessed one after the other, which is often efficient. c) Data structure like queue or stack cannot be implemented: This is also incorrect. While arrays are not the optimal choice for implementing queues or stacks, it's possible to do so with additional logic. Therefore, the most significant disadvantage of arrays in terms of memory efficiency is the potential wastage of space when the array is not fully utilized.

Q134: What is a data structure?

- A) A programming language
- B) A collection of algorithms
- C) A way to store and organize data
- D) A type of computer hardware

Correct: A way to store and organize data

Q135: Which forms have a relation that contains information about a single entity?

- A) a) 4NF
- B) b) 2NF
- C) c) 5NF
- D) d) 3NF

Correct: d) 3NF

Explanation: A table is in its 3rd NF if it has already completed in 2NF, and non-key attributes are not dependent on any non-key attributes. This means that all non-key attributes must depend on primary key. When a table represents a single entity, the primary key will identify the instance row and all attributes in 3NF are dependent on the primary key. So, the primary key in the 3th NF captures the whole information of this single entity.

Q136: _____ operations do not preserve non-matched tuples.

- A) a) Left outer join
- B) b) Inner join
- C) c) Natural join
- D) d) Right outer join

Correct: b) Inner join

Explanation: Inner Join and Non-Matched Tuples Inner join returns only the rows that have matching values in both tables. This means that any tuples that don't have a corresponding match in the other table are excluded from the result. Other Join Types Left outer join: Preserves all tuples from the left table, even if there are no matches in the right table. Right outer join: Preserves all tuples from the right table, even if there are no matches in the left table. Natural join: Similar to inner join, but only considers columns with the same name for matching. In summary, while outer joins include unmatched tuples in the result, inner join strictly focuses on matching rows and discards any that don't have a corresponding match.

Q137: Procedural language among the following is ____

- A) a) Domain relational calculus
- B) b) Tuple relational calculus
- C) c) Relational algebra
- D) d) Query language

Correct: c) Relational algebra

Explanation: Relational Algebra is a Procedural Language Relational algebra is indeed a procedural language. This means it specifies a sequence of operations that must be performed in a specific order to achieve the desired result. It's like providing a recipe for manipulating data within a database. Why not the others? Domain relational calculus and tuple relational calculus are declarative languages. They specify what data is desired without specifying how to compute it. Query language is a broad term that can encompass both procedural and non-procedural languages. Key point: Relational algebra provides a step-by-step approach to manipulating data, making it a procedural language.

Q138: Which of the following command is correct to delete the values in the relation teaches?

- A) a) Delete from teaches;
- B) b) Delete from teaches where Id ='Null';
- C) c) Remove table teaches;
- D) d) Drop table teaches;

Correct: a) Delete from teaches;

Explanation: Breakdown of other options: DELETE FROM teaches WHERE Id =

DELETE FROM teaches WHERE Id IS NULL; This command would only delete rows where the Id column has a NULL value. It wouldn't delete all rows. REMOVE TABLE teaches; There's no standard SQL command named REMOVE. DROP TABLE teaches; This command would delete the entire table structure, including its data and definition, which is typically not desired when you just want to clear the data. So, the simple and effective way to delete all data from the teaches table is by using DELETE FROM teaches;.

Q139: Which of the following set should be associated with weak entity set for weak entity to be meaningful?

- A) a) Neighbour set
- B) b) Strong entity set
- C) c) Owner set
- D) d) Identifying set

Correct: d) Identifying set

Explanation: Identifying Set A weak entity set must be associated with an identifying set for it to be meaningful. Here's a breakdown: Weak Entity Set: An entity set that cannot exist independently and depends on another entity set (strong entity set) for its existence. Identifying Set: A set of attributes in a strong entity set that uniquely identifies each entity in the weak entity set. Essentially, a weak entity set needs a "parent" strong entity set to provide it with a unique identifier. This is because a weak entity set doesn't have sufficient attributes on its own to form a primary key. Example: Strong Entity Set: Employee (Employee_ID, Employee_Name, Department) Weak Entity Set: Dependent (Dependent_Name, Relationship, Employee_ID)

Q140: Which command is used to remove a relation from an SQL?

- A) a) Drop table
- B) b) Delete
- C) c) Purge
- D) d) Remove

Correct: a) Drop table

Explanation: DROP TABLE is the SQL command used to remove an entire relation (table) from a database. Here's a breakdown of why the other options are incorrect: DELETE: This command removes rows (tuples) from a table, but it doesn't remove the table itself. PURGE: This command is not a standard SQL command. It might exist in specific database

systems with particular functionalities, but it's not generally used for removing tables. REMOVE: This is also not a standard SQL command for removing tables. So, DROP TABLE is the correct choice for permanently deleting a table from a database.

Q141: ___ is a set of one or more attributes taken collectively to uniquely identify a record.

- A)** a) Primary Key
- B)** b) Foreign key
- C)** c) Super key
- D)** d) Candidate key

Correct: c) Super key

Explanation: A super key is actually a set of one or more attributes that uniquely identify a record. Breakdown of the options: Super key: Any set of attributes that uniquely identifies a tuple (row) in a relation (table). Candidate key: A minimal super key (no unnecessary attributes). Primary key: A chosen candidate key to uniquely identify a record. Foreign key: A field in one table that refers to the primary key in another table. So, while a super key is a broader term encompassing any set of attributes that uniquely identify a record, it's not the most specific or commonly used term. Candidate key or primary key would be more appropriate in most cases.

Q142: The ability to query data, as well as insert, delete, and alter tuples, is offered by ___

- A)** a) TCL (Transaction Control Language)
- B)** b) DCL (Data Control Language)
- C)** c) DDL (Data Definition Language)
- D)** d) DML (Data Manipulation Language)

Correct: c) DDL (Data Definition Language)

Explanation: DML (Data Manipulation Language) is the language component responsible for manipulating data within a database. This includes the operations you mentioned: Querying data: Retrieving information from the database. Inserting data: Adding new records to the database. Deleting data: Removing existing records from the database. Altering data: Modifying the values of existing records. Brief overview of other options: DDL (Data Definition Language): Defines the structure of the database, including creating, modifying, and dropping tables, indexes, and other database objects. DCL (Data Control Language): Deals with access control

to the database, granting or revoking privileges to users. TCL (Transaction Control Language): Manages the integrity and consistency of data through transactions (commit, rollback, savepoint). So, DML is the correct choice for performing actions on the data itself.

Q143: The DBMS acts as an interface between ____ and ____ of an enterprise-class system.

- A) a) Data and the DBMS
- B) b) Application and SQL
- C) c) Database application and the database
- D) d) The user and the software

Correct: c) Database application and the database

Explanation: A DBMS acts as an interface between a database application and the database. Here's a breakdown: Database Application: This is the software that interacts with the user and provides a way to access and manipulate the data in the database. Examples include accounting software, inventory management systems, or customer relationship management (CRM) tools. Database: This is the underlying storage structure that holds the data. It's where the information is physically stored. Role of the DBMS: Translation: The DBMS translates requests from the application into operations that the database can understand. Data Management: It handles tasks like data storage, retrieval, updating, and deletion. Security: It ensures data integrity, security, and concurrency control. By acting as this intermediary, the DBMS simplifies the process for application developers and users, allowing them to focus on their specific needs without worrying about the complexities of data management.

Q144: ____ is a hardware component that is most important for the operation of a database management system.

- A) a) Microphone
- B) b) High speed, large capacity disk to store data
- C) c) High-resolution video display
- D) d) Printer

Correct: b) High speed, large capacity disk to store data

Explanation: A high-speed, large capacity disk is the most critical hardware component for a database management system (DBMS). Here's why: Data Storage: A DBMS is designed to store and manage vast amounts of data. A large capacity disk provides the necessary space to accommodate the growing database. Performance: High-speed disks enable rapid data

access and retrieval. This is essential for efficient database operations like querying, updating, and deleting data. Reliability: Databases often contain critical information. A reliable disk ensures data integrity and prevents data loss. While other components like a monitor, printer, or microphone are important for interacting with the DBMS, they are not as critical to its core functionality as the disk. Therefore, option b) is indeed the correct answer.

Q145: What does an RDBMS consist of?

- A)** a) Collection of Records
- B)** b) Collection of Keys
- C)** c) Collection of Tables
- D)** d) Collection of Fields

Correct: c) Collection of Tables

Explanation: A foreign key is a column (or a set of columns) in one table that refers to the primary key of another table. It establishes a link between the two tables, ensuring data consistency and integrity.
 1. sampletestcases.com sampletestcases.com 2. medium.com medium.com
Imagine this: You have a table called "Customers" with columns like "Customer ID", "Name", "Address". You have another table called "Orders" with columns like "Order ID", "Customer ID", "Order Date", "Total Amount". The "Customer ID" in the "Orders" table is a foreign key. It references the "Customer ID" in the "Customers" table. This means that every order must be associated with an existing customer. Key points about foreign keys: It maintains referential integrity, ensuring that related data exists. It helps to normalize data by reducing redundancy. It allows you to retrieve related data efficiently through joins. By using foreign keys, you create a structured and connected database where information can be easily managed and retrieved.

Q146: What is information about data called?

- A)** a) Hyper data
- B)** b) Tera data
- C)** c) Meta data
- D)** d) Relations

Correct: c) Meta data

Explanation: Primary Key A primary key is a unique identifier for a record in a database table.

Imagine a table of students. Each student has a unique student ID number. This student ID would be the primary key because it uniquely identifies each student record. Key characteristics of a primary key: Unique: No two records can have the same primary key value. Not Null: Every record must have a primary key value. Minimal: It should contain only the necessary columns to uniquely identify a record. Purpose: To efficiently locate specific records. To establish relationships between tables (foreign keys). To maintain data integrity. By using primary keys, a database system can quickly find, update, or delete specific records without confusion or errors.

Q147: Which of the following is known as a set of entities of the same type that share same properties, or attributes?

- A) a) Relation set
- B) b) Tuples
- C) c) Entity set
- D) d) Entity Relation model

Correct: c) Entity set

Explanation: An entity set is a collection of entities that share the same characteristics or attributes. Think of it as a group of similar things. For example, if we're talking about a university database, an entity set could be "Students". All students share common attributes like student ID, name, address, etc. So, the correct answer is c) Entity set.

Q148: Which of the following is a component of the DBMS?

- A) a) Data
- B) b) Data Languages
- C) c) Data Manager
- D) d) All of the above

Correct: d) All of the above

Explanation: A Database Management System (DBMS) is composed of several essential components that work together to manage data efficiently. Let's break down each option: Data: This is the core of any database. It refers to the information stored within the system. Data Languages: These are special languages used to interact with the database. They include: DDL (Data Definition Language): For creating and modifying database structures. DML (Data Manipulation Language): For inserting, updating, deleting, and retrieving data. DCL (Data Control Language): For granting and revoking user permissions. Data Manager: This is the software component that handles the overall management of the database. It ensures data

integrity, security, and efficient access. As you can see, all three components are integral parts of a DBMS. Therefore, the correct answer is d) All of the above. A DBMS would be incomplete without any of these elements. They work in harmony to provide a robust and reliable system for managing data.

Q149: Which of the following is a function of the DBMS?

- A)** a) Storing data
- B)** b) Providing multi-users access control
- C)** c) Data Integrity
- D)** d) All of the above

Correct: d) All of the above

Explanation: A Database Management System (DBMS) is essentially a software application that interacts with the user, applications, and the database itself to capture and analyze data. Its primary functions encompass: Storing data: This is the fundamental role of a DBMS. It efficiently manages and organizes large volumes of data in a structured format, making it accessible when needed. Providing multi-user access control: A DBMS ensures that multiple users can access and manipulate data simultaneously without conflicts or compromising data integrity. It implements security measures to protect data from unauthorized access. Data Integrity: A DBMS maintains data consistency and accuracy by enforcing rules, constraints, and validation checks. It prevents errors, inconsistencies, and data loss. Since all three options (storing data, providing multi-user access control, and data integrity) are core functions of a DBMS, the correct answer is d) All of the above. In essence, a DBMS acts as a central repository for data, providing controlled access and ensuring its reliability. Sources and related content

Q150: Which of the following is not a function of the database?

- A)** a) Managing stored data
- B)** b) Manipulating data
- C)** c) Security for stored data
- D)** d) Analysing code

Correct: d) Analysing code

Explanation: Databases are designed to handle data, not code. They excel at: Storing: Keeping information organized and readily available. Managing: Allowing efficient access, retrieval, and modification of data. Securing: Protecting sensitive information through access control and encryption. Analyzing code, on the other hand, is typically done by specialized

software tools or programming languages.

Q151: Which of the following is a feature of the database?

- A) a) No-backup for the data stored
- B) b) User interface provided
- C) c) Lack of Authentication
- D) d) Store data in multiple locations

Correct: b) User interface provided

Explanation: User interface provided is a feature of a database. A user interface allows users to interact with the database to perform tasks like searching, adding, modifying, or deleting data.

Q152: Which of the following is not a feature of DBMS?

- A) a) Minimum Duplication and Redundancy of Data
- B) b) High Level of Security
- C) c) Single-user Access only
- D) d) Support ACID Property

Correct: c) Single-user Access only

Explanation: Single-user access only is NOT a feature of DBMS. DBMS systems are designed to handle multiple users accessing and manipulating data simultaneously. This is a core functionality. Here's a breakdown of the other options: Minimum Duplication and Redundancy of Data: DBMS ensures data integrity by preventing data duplication and redundancy. High Level of Security: DBMS provides mechanisms to protect data from unauthorized access. Support ACID Property: ACID (Atomicity, Consistency, Isolation, Durability) is a fundamental property of transaction management in DBMS, ensuring data integrity. Therefore, single-user access only is the outlier and not a feature of DBMS.

Q153: Which of the following is not an example of DBMS?

- A) a) MySQL
- B) b) Microsoft Access
- C) c) IBM DB2

D) d) Google

Correct: d) Google

Explanation: Google is not a Database Management System (DBMS). A DBMS is a software application used to create, manage, and manipulate databases. MySQL, Microsoft Access, and IBM DB2 are examples of DBMS software. Google is a search engine and technology company.

Q154: Which of the following is not a type of database?

A) a) Hierarchical

B) b) Network

C) c) Distributed

D) d) Decentralized

Correct: d) Decentralized

Explanation: Decentralized is not a traditional type of database. Here's a brief explanation of the other options: Hierarchical: Data is organized in a tree-like structure with a single root. Network: Data is organized in a graph-like structure with multiple parent-child relationships. Distributed: Data is stored on multiple computers connected by a network. Decentralization is more of a concept or architecture than a specific database type. It refers to systems where control and management are distributed among multiple entities rather than centralized in a single location. While decentralized systems can use various database technologies, they are not a database type themselves. In essence, while decentralized databases are emerging as a concept, they don't fit into the traditional categorization of database types like hierarchical, network, or distributed.

Q155: In which of the following formats data is stored in the database management system?

A) a) Image

B) b) Text

C) c) Table

D) d) Graph

Correct: c) Table

Explanation: Data is primarily stored in a table format within a Database Management System. Why Tables? Organization: Tables provide a structured way to organize data into rows and

columns. Each row represents a record, and each column represents a specific attribute or field. Efficiency: This format allows for efficient data storage, retrieval, and manipulation. Indexing: Databases can create indexes on columns, enabling rapid searching and sorting of data. Relationships: Tables can be linked together to represent complex relationships between data (e.g., one-to-one, one-to-many, many-to-many). Other Formats While tables are the fundamental structure, it's important to note that: Images, text, and other data types can be stored within tables as part of a record, often as references to external files or as binary data. Graphs are typically not a direct storage format in traditional relational databases. However, graph databases specialize in storing and managing graph-structured data. In summary, while a DBMS can handle various data types, the core structure for organizing and managing data is the table.

Q156: Which type of data can be stored in the database?

- A) a) Image oriented data
- B) b) Text, files containing data
- C) c) Data in the form of audio or video
- D) d) All of the above

Correct: d) All of the above

Explanation: Text: Plain text, character strings, and text-based data. Numbers: Integers, decimals, floating-point numbers, and other numerical values. Unstructured Data Images: Photos, graphics, and other visual content. Audio: Music, sound effects, and voice recordings. Video: Movies, TV shows, and other video content. Documents: Word documents, PDFs, and other document formats. Other Data Types Geospatial Data: Location data, maps, and geographic information. Time-Series Data: Data points collected at specific intervals. Graph Data: Networks of interconnected nodes and relationships. Note: The specific data types supported by a database system can vary depending on the database management system (DBMS) used.

Q157: Who created the first DBMS?

- A) a) Edgar Frank Codd
- B) b) Charles Bachman
- C) c) Charles Babbage
- D) d) Sharon B. Codd

Correct: b) Charles Bachman

Explanation: Charles Bachman developed the Integrated Data Store (IDS) in the 1960s, which is widely recognized as the first DBMS. His work laid the foundation for modern database systems. While Edgar Codd is also a significant figure in database history, he is primarily known for developing the relational database model, which came later.

Q158: What is DBMS?

- A) a) DBMS is a collection of queries
- B) b) DBMS is a high-level language
- C) c) DBMS is a programming language
- D) d) DBMS stores, modifies and retrieves data

Correct: d) DBMS stores, modifies and retrieves data

Explanation: DBMS stores, modifies, and retrieves data is the correct answer! A Database Management System (DBMS) is essentially a software application that acts as an intermediary between the user and the database. Its primary functions are: Storing data: Organizing and saving information in a structured format. Modifying data: Allowing users to update, change, or delete existing data. Retrieving data: Enabling users to access and extract specific information from the database.

Q159: What is a database?

- A) a) Organized collection of information that cannot be accessed, updated, and managed
- B) b) Collection of data or information without organizing
- C) c) Organized collection of data or information that can be accessed, updated, and managed
- D) d) Organized collection of data that cannot be updated

Correct: c) Organized collection of data or information that can be accessed, updated, and managed

Explanation: Organized collection of data or information that can be accessed, updated, and managed is the correct definition of a database. Organized: Data is structured in a specific way (e.g., tables, records, fields) for efficient retrieval. Collection: It contains multiple pieces of related information. Accessed, updated, and managed: The database system allows users to retrieve, modify, and control the data within it. A database is essentially a digital repository designed to store, organize, and manage information effectively. It's a fundamental component in modern computing, used in everything from small-scale applications to large enterprise systems.

Q160: What is the full form of DBMS?

- A) a) Data of Binary Management System
- B) b) Database Management System
- C) c) Database Management Service
- D) d) Data Backup Management System

Correct: b) Database Management System

Explanation: A DBMS is a software application that interacts with end-users, applications, and the database itself to capture and analyze data. It serves as an intermediary between the database and its end-users. Key functions of a DBMS include: Creating, storing, and managing databases Providing access to data for various users and applications Ensuring data integrity, consistency, and security Optimizing database performance Popular examples of DBMS software: MySQL Oracle Database SQL Server PostgreSQL MongoDB (NoSQL database) Would you like to learn more about DBMS or its components?

Q161: The two steps the operating system takes to use a disk to hold its files are and __

- A) a) caching & logical formatting
- B) b) logical formatting & swap space creation
- C) c) swap space creation & caching
- D) d) partitioning & logical formatting

Correct: d) partitioning & logical formatting

Explanation: partitioning & logical formatting Partitioning: This involves dividing the disk into separate sections called partitions. Each partition can be used independently to store different types of data or operating systems. Logical formatting: This process creates a file system structure on a partition, defining how data is organized and stored on the disk. It creates directories, files, and other metadata necessary for file management. These two steps are essential to prepare a disk for storing and managing files effectively.

Q162: The __ program initializes all aspects of the system, from CPU registers to device controllers and the contents of main memory, and then starts the operating system.

- A)** a) bootstrap
- B)** b) main
- C)** c) bootloader
- D)** d) rom

Correct: a) bootstrap

Explanation: bootstrap The bootstrap program is the initial software that runs when a computer is powered on or restarted. It performs essential tasks like: Initializing hardware components
Loading the operating system into memory
Transferring control to the operating system
Essentially, it bridges the gap between hardware and software, setting the stage for the operating system to take over.

Q163: Network operating system runs on _

- A)** a) every system in the network
- B)** b) server
- C)** c) both server and every system in the network
- D)** d) none of the mentioned

Correct: b) server

Explanation: server A network operating system (NOS) primarily runs on a server. It manages network resources, security, and file sharing for clients connected to the network. While individual client systems have their own operating systems to manage local resources, the NOS is centralized on the server to coordinate network-wide operations.

Q164: What are the types of distributed operating systems?

- A)** a) Zone based Operating system
- B)** b) Level based Operating system
- C)** c) Network Operating system
- D)** d) All of the mentioned

Correct: c) Network Operating system

Explanation: Types of Distributed Operating Systems c) Network Operating System is the

correct answer. While there are various architectural models within distributed systems (like client-server, peer-to-peer, etc.), the overarching term for an operating system that manages a network of computers is a Network Operating System (NOS). Incorrect options: Zone-based Operating System: This term doesn't have a standard definition in the context of operating systems. Level-based Operating System: This term also doesn't have a standard definition in the context of operating systems. Therefore, Network Operating System is the most accurate and widely recognized term for an operating system that manages a distributed system.

Q165: In Unix, which system call creates the new process?

- A) a) create
- B) b) fork
- C) c) new
- D) d) none of the mentioned

Correct: b) fork

Explanation: fork The fork() system call is used in Unix-like operating systems to create a new process. It creates a copy of the current process, called a child process, which runs concurrently with the parent process.

Q166: Whenever a process needs I/O to or from a disk it issues a ____

- A) a) system call to the operating system
- B) b) a special procedure
- C) c) system call to the CPU
- D) d) all of the mentioned

Correct: a) system call to the operating system

Explanation: system call to the operating system Whenever a process requires input or output operations involving a disk, it initiates a system call to the operating system. This system call informs the OS about the specific I/O request, such as reading or writing data to a particular location on the disk. The OS then handles the request, interacts with the disk controller, and eventually returns control to the process when the operation is complete.

Q167: On systems where there are multiple operating system, the decision to load

a particular one is done by _

- A)** a) process control block
- B)** b) file control block
- C)** c) boot loader
- D)** d) bootstrap

Correct: c) boot loader

Explanation: boot loader The boot loader is responsible for loading the operating system when a computer is turned on. In systems with multiple operating systems, the boot loader provides a menu or options to select the desired operating system to load.

Q168: To recover from failures in the network operations _ information may be maintained.

- A)** a) operating system
- B)** b) ip address
- C)** c) stateless
- D)** d) state

Correct: d) state

Explanation: state To recover from failures in network operations, state information is crucial. This information includes details about the current status of connections, data transfers, and other relevant parameters. By maintaining state information, network protocols and applications can restore communication and resend lost data in case of failures. For example, TCP (Transmission Control Protocol) uses sequence numbers and acknowledgments to keep track of data packets and retransmit lost ones. This state information is essential for reliable data transfer.

Q169: The operating system _ the links when traversing directory trees, to preserve the acyclic structure of the system.

- A)** a) deletes
- B)** b) considers
- C)** c) ignores

D) d) none of the mentioned

Correct: c) ignores

Explanation: ignores The operating system ignores the links when traversing directory trees. This is because links are essentially shortcuts or pointers to existing files or directories, and they don't affect the underlying directory structure. The operating system follows the actual directory paths to navigate the file system.

Q170: The operating system keeps a small table containing information about all open files called ____

- A)** a) file table
- B)** b) directory table
- C)** c) open-file table
- D)** d) system table

Correct: c) open-file table

Explanation: open-file table The operating system maintains an open-file table to keep track of information about all open files. This table contains details such as: File pointer (current position within the file) Access permissions File attributes Buffer addresses This information is crucial for efficient file management and access.

Q171: The information about all files is kept in ____

- A)** a) operating system
- B)** b) separate directory structure
- C)** c) swap space
- D)** d) none of the mentioned

Correct: b) separate directory structure

Explanation: b) separate directory structure The information about all files is kept in a separate directory structure. This structure organizes files and directories hierarchically, making it easy to locate and manage files.

Q172: If the sum of the working – set sizes increases, exceeding the total number

of available frames ____

- A)** a) the operating system selects a process to suspend
- B)** b) the system crashes
- C)** c) then the process crashes
- D)** d) the memory overflows

Correct: a) the operating system selects a process to suspend

Explanation: the operating system selects a process to suspend This is correct. Working set is the set of memory pages actively used by a process. If the total size of all active processes' working sets exceeds the available physical memory, the operating system faces a memory shortage. To prevent system slowdown or crashes due to excessive page swapping (thrashing), the operating system typically suspends one or more processes. This frees up their memory frames, reducing the overall memory demand and allowing the remaining processes to continue operating efficiently.

Q173: The priority of a process will ____ if the scheduler assigns it a static priority.

- A)** a) depends on the operating system
- B)** b) change
- C)** c) remain unchanged
- D)** d) none of the mentioned

Correct: c) remain unchanged

Explanation: remain unchanged If a scheduler assigns a static priority to a process, it means that the priority of that process will not change throughout its lifetime. It remains fixed and is not affected by any other factors like CPU usage, I/O wait time, or other process-related metrics. This is in contrast to dynamic priority scheduling, where a process's priority can change based on various criteria.

Q174: Which one of the following is a real time operating system?

- A)** a) Windows CE
- B)** b) RTLinux
- C)** c) VxWorks

D) d) All of the mentioned

Correct: d) All of the mentioned

Explanation: All of the mentioned All of the options listed - Windows CE, RTLinux, and VxWorks - are considered real-time operating systems (RTOS). Each is designed to handle time-critical tasks with strict deadlines, making them suitable for applications like industrial control, robotics, and aerospace. Windows CE: A versatile RTOS developed by Microsoft for embedded systems. RTLinux: A real-time extension for the Linux kernel. VxWorks: A widely used commercial RTOS known for its reliability and performance.

Q175: For real time operating systems, interrupt latency should be ____

A) a) zero

B) b) minimal

C) c) maximum

D) d) dependent on the scheduling

Correct: b) minimal

Explanation: Interrupt latency should be minimal for real-time operating systems. Interrupt latency is the time elapsed between an interrupt occurring and the start of its service routine. In real-time systems, where timely responses are critical, minimizing interrupt latency is crucial to ensure that events are handled promptly. A long interrupt latency can lead to missed deadlines and system failures. Therefore, real-time operating systems employ techniques like priority-based interrupt handling and efficient interrupt service routines to reduce interrupt latency as much as possible.

Q176: Hard real time operating system has ____ jitter than a soft real time operating system.

A) a) equal

B) b) more

C) c) less

D) d) none of the mentioned

Correct: c) less

Explanation: less A hard real-time operating system (RTOS) has less jitter than a soft real-time operating system. Jitter refers to the variation in response time from one instance to another. A

hard RTOS is designed for systems where missing deadlines can have catastrophic consequences, such as in medical equipment or flight control systems. To ensure this, they have strict timing requirements and minimal jitter. In contrast, soft RTOS can tolerate some variation in response time without severe consequences. Therefore, hard RTOS have a much lower tolerance for jitter compared to soft RTOS.

Q177: In real time operating system __

- A) a) process scheduling can be done only once
- B) b) all processes have the same priority
- C) c) kernel is not required
- D) d) a task must be serviced by its deadline period

Correct: d) a task must be serviced by its deadline period

Explanation: a task must be serviced by its deadline period In a real-time operating system (RTOS), the critical characteristic is that tasks have strict deadlines that must be met. If a task is not completed within its specified deadline, it is considered a failure. This is unlike general-purpose operating systems where meeting deadlines is not a strict requirement.

Q178: The _ presents a uniform device-access interface to the I/O subsystem, much as system calls provide a standard interface between the application and the operating system.

- A) a) Device drivers
- B) b) I/O systems
- C) c) Devices
- D) d) Buses

Correct: a) Device drivers

Explanation: Device drivers present a uniform device-access interface to the I/O subsystem. They act as a bridge between the operating system and hardware devices, providing a standardized way for applications to interact with different types of devices. This abstraction layer simplifies the development of applications and makes the I/O subsystem more manageable.

Q179: The operating system maintains a __ table that keeps track of how many

frames have been allocated, how many are there, and how many are available.

- A)** a) memory
- B)** b) mapping
- C)** c) page
- D)** d) frame

Correct: d) frame

Explanation: frame table is a data structure used by the operating system to keep track of physical memory frames. It contains information about the status of each frame, such as whether it's free or allocated to a process, and if allocated, which page is currently stored in it. This information is crucial for memory management and page replacement algorithms.

Q180: Using transient code, _ the size of the operating system during program execution.

- A)** a) maintains
- B)** b) changes
- C)** c) increases
- D)** d) decreases

Correct: b) changes

Explanation: b) changes Transient code is temporary code that is loaded into memory only when needed and then removed. As a result, the size of the operating system changes during program execution. It increases when the transient code is loaded and decreases when it is removed.

Q181: The operating system and the other processes are protected from being modified by an already running process because ____

- A)** a) every address generated by the CPU is being checked against the relocation and limit registers
- B)** b) they have a protection algorithm
- C)** c) they are in different memory spaces
- D)** d) they are in different logical addresses

Correct: a) every address generated by the CPU is being checked against the relocation and limit registers

Explanation: every address generated by the CPU is being checked against the relocation and limit registers This is the correct answer. Relocation register: Holds the base address of a process's memory space. Limit register: Specifies the maximum size of a process's memory space. Whenever a process generates an address, the CPU checks it against these registers. If the address is within the process's allowed memory range, it's valid. Otherwise, it's considered an invalid access and is prevented. This mechanism protects the operating system and other processes from being corrupted by a rogue process. This protection is essential for maintaining system integrity and security.

Q182: The operating system is responsible for?

- A) a) bad-block recoveryb) booting from diskc) disk initializationd) all of the mentioned
- B) all of the mentioned
- C) The operating system is responsible for:

Correct: all of the mentioned

Q183: The main memory accommodates ____

- A) a) cpu
- B) b) user processes
- C) c) operating system
- D) d) all of the mentioned

Correct: c) operating system

Explanation: c) operating system The main memory primarily accommodates the operating system. It stores the core components of the OS, which are essential for managing the computer's resources and controlling its operations. While user processes and parts of the CPU (registers, cache) also reside in memory, the operating system is the primary occupant and manager of main memory.

Q184: Swapping _ be done when a process has pending I/O, or has to execute I/O operations only into operating system buffers.

- A) a) must never

B) b) maybe

C) c) can

D) d) must

Correct: a) must never

Explanation: a) must never Swapping a process with pending I/O or one that is executing I/O operations into operating system buffers is not advisable because: Inconsistency: If a process is swapped out while waiting for I/O, the I/O completion might occur while the process is not in memory. This can lead to data inconsistency. Overhead: Continuously swapping processes in and out due to I/O operations can introduce significant overhead, impacting system performance. To avoid these issues, operating systems typically employ techniques like buffering or double buffering to handle I/O operations without requiring process swapping.

Q185: A deadlock avoidance algorithm dynamically examines the ___ to ensure that a circular wait condition can never exist.

A) a) operating system

B) b) resources

C) c) system storage state

D) d) resource allocation state

Correct: d) resource allocation state

Explanation: This means it looks at the current allocation of resources to processes and the maximum resource needs of each process to determine if granting a resource request would lead to a deadlock. By analyzing this information, the algorithm can prevent deadlock by denying requests that could potentially create a circular wait. The Banker's Algorithm is a classic example of a deadlock avoidance algorithm.

Q186: For an effective operating system, when to check for deadlock?

A) a) every time a resource request is made at fixed time intervals

B) b) at fixed time intervals

C) c) every time a resource request is made

D) d) none of the mentioned

Correct: a) every time a resource request is made at fixed time intervals

Explanation: Checking for deadlock every time a resource request is made is the most effective approach. This is because: Early detection: It allows for immediate identification of potential deadlocks, preventing them from escalating. Resource optimization: By detecting deadlocks early, the system can take corrective actions, such as process termination or resource preemption, to avoid system-wide issues. Efficient resource utilization: Continuously monitoring resource requests helps in optimizing resource allocation and preventing deadlocks. While checking at fixed intervals might be less computationally expensive, it increases the risk of missing deadlock conditions, especially if the interval is too long. Therefore, checking for deadlock at every resource request offers the best balance between efficiency and deadlock prevention.

Q187: The FCFS algorithm is particularly troublesome for ____

- A) a) operating systems
- B) b) multiprocessor systems
- C) c) time sharing systems
- D) d) multiprogramming systems

Correct: c) time sharing systems

Explanation: FCFS (First Come First Served) is particularly troublesome for time-sharing systems. In time-sharing systems, multiple users share the CPU, and each user expects a quick response. FCFS, where processes are executed in the order they arrive, can lead to long wait times for users whose processes are behind long-running ones. This results in poor responsiveness and user dissatisfaction. To address this, time-sharing systems typically use scheduling algorithms like Round Robin or Priority scheduling, which provide better fairness and responsiveness.

Q188: The portion of the process scheduler in an operating system that dispatches processes is concerned with ____

- A) a) assigning ready processes to waiting queue
- B) b) assigning running processes to blocked queue
- C) c) assigning ready processes to CPU
- D) d) all of the mentioned

Correct: c) assigning ready processes to CPU

Explanation: The portion of the process scheduler that dispatches processes is concerned with

assigning ready processes to the CPU. This means it's responsible for selecting which process from the ready queue will be allocated the CPU for execution.

Q189: Transient operating system code is a code that ____

- A) a) stays in the memory always
- B) b) never enters the memory space
- C) c) comes and goes as needed
- D) d) is not easily accessible

Correct: c) comes and goes as needed

Explanation: Transient operating system code is code that comes and goes as needed. It's not permanently resident in memory. This type of code is often used for specific tasks or functions that are not required continuously. For example, device drivers or certain system utilities might be loaded into memory only when needed and then unloaded to free up memory space for other processes.

Q190: When a process is in a "Blocked" state waiting for some I/O service. When the service is completed, it goes to the ____

- A) a) Terminated state
- B) b) Suspended state
- C) c) Running state
- D) d) Ready state

Correct: d) Ready state

Explanation: When a process is in a "Blocked" state waiting for I/O, it goes to the Ready state once the I/O operation completes. A process enters the Blocked state when it needs to wait for an external event, such as I/O completion. Once the wait is over, the process is ready to resume execution and is moved to the Ready state. It then competes with other ready processes for the CPU.

Q191: Cascading termination refers to the termination of all child processes if the parent process terminates ____

- A) a) Normally or abnormally

- B) b) Abnormally**
- C) c) Normally**
- D) d) None of the mentioned**

Correct: a) Normally or abnormally

Explanation: Cascading termination occurs when both normal and abnormal termination of a parent process leads to the termination of all its child processes.

Q192: In a timeshare operating system, when the time slot assigned to a process is completed, the process switches from the current state to?

- A) a) Suspended state**
- B) b) Terminated state**
- C) c) Ready state**
- D) d) Blocked state**

Correct: c) Ready state

Explanation: Ready state. When a process's time slot ends, it means the process is still able to run but needs to wait for its turn again. So, it moves to the ready state, indicating it's prepared to resume execution as soon as the CPU becomes available.

Q193: In operating system, each process has its own ____

- A) a) open files**
- B) b) pending alarms, signals, and signal handlers**
- C) c) address space and global variables**
- D) d) all of the mentioned**

Correct: d) all of the mentioned

Explanation: all of the mentioned is correct. Each process in an operating system operates independently and has its own: Open files: A process can open and access specific files without affecting other processes's file access. Pending alarms, signals, and signal handlers: These are used for process synchronization and communication, and each process manages its own set. Address space and global variables: This isolates a process's data and code from other processes, preventing conflicts and ensuring data integrity. These separate

resources allow for concurrent execution of multiple processes without interfering with each other.

Q194: Which one of the following is not a real time operating system?

- A) a) RTLinux
- B) b) Palm OS
- C) c) QNX
- D) d) VxWorks

Correct: b) Palm OS

Explanation: Real-Time Operating Systems (RTOS) vs. General-Purpose Operating Systems
To understand why Palm OS isn't a real-time operating system, it's essential to differentiate between RTOS and general-purpose operating systems. Real-Time Operating Systems (RTOS) An RTOS is specifically designed to handle time-critical tasks with strict deadlines. It prioritizes processes based on their importance and ensures that they are executed within their designated timeframes. RTOSes are crucial in systems where timely responses are paramount, such as industrial control systems, medical equipment, and aerospace applications. Key characteristics of RTOS include: Deterministic behavior: Tasks execute predictably within defined time constraints. High performance: Minimal overhead to ensure fast response times. Real-time scheduling algorithms: Efficiently allocate CPU time to critical tasks. Examples of RTOS include RTLinux, QNX, and VxWorks. General-Purpose Operating Systems These operating systems are designed for a wide range of applications and prioritize user experience and multitasking capabilities. They often have less stringent timing requirements compared to RTOS. Examples include Windows, macOS, and Linux. Why Palm OS Isn't an RTOS Palm OS was developed primarily for personal digital assistants (PDAs), which have less stringent real-time requirements compared to industrial or medical applications. Its focus was on user-friendliness and basic task management rather than high-performance, time-critical operations. As a result, Palm OS lacks the essential characteristics of an RTOS, such as deterministic behavior and real-time scheduling. In conclusion, while Palm OS was a popular operating system for its time, it was not designed for the demanding requirements of real-time applications, making it unsuitable for tasks that necessitate strict timing constraints.

Q195: If a process fails, most operating system write the error information to a ____

- A) a) new file
- B) b) another running process
- C) c) log file

D) d) none of the mentioned

Correct: c) log file

Explanation: Log file is where most operating systems write error information when a process fails. A log file is a dedicated file designed to record system events, including errors. By storing error information in a log file, the operating system can provide a detailed record of the issue for later analysis, troubleshooting, and debugging. This helps system administrators and developers identify the root cause of problems and implement solutions. Creating a new file for each error would be inefficient and impractical. Writing to another running process could interfere with its operation and potentially cause further issues.

Q196: Where is the operating system placed in the memory?

A) a) either low or high memory (depending on the location of interrupt vector)

B) b) in the low memory

C) c) in the high memory

D) d) none of the mentioned

Correct: a) either low or high memory (depending on the location of interrupt vector)

Explanation: The exact placement of the operating system in memory depends on the architecture of the system. However, a common practice is to place it either in low memory or high memory. Low Memory: This was a common approach in older systems. Placing the OS in low memory often coincided with the placement of the interrupt vector, a table of addresses used to handle hardware interrupts. This arrangement simplified the process of handling interrupts. High Memory: In modern systems, there's a trend towards placing the OS in higher memory addresses. This is often due to architectural reasons, memory management techniques, and to protect the OS from accidental overwrites. Ultimately, the specific location of the operating system in memory is determined by the system's design and the underlying hardware architecture.

Q197: Which one of the following errors will be handle by the operating system?

A) a) lack of paper in printer

B) b) connection failure in the network

C) c) power failure

D) d) all of the mentioned

Correct: d) all of the mentioned

Explanation: Lack of paper in the printer: While the OS cannot physically add paper, it can detect the error and notify the user. It can also suspend the print job until the issue is resolved. Connection failure in the network: The OS can detect network failures, retry connections, and inform the user of the issue. It can also manage network resources and prioritize traffic. Power failure: The OS can initiate a shutdown process to save data and prevent corruption. It can also handle system recovery upon reboot. While the OS might not be able to fully resolve all aspects of these errors, it plays a crucial role in managing system behavior and informing the user. Therefore, option d) all of the mentioned is correct.

Q198: CPU scheduling is the basis of _

- A) a) multiprogramming operating systems
- B) b) larger memory sized systems
- C) c) multiprocessor systems
- D) d) none of the mentioned

Correct: a) multiprogramming operating systems

Explanation: CPU scheduling is the basis of multiprogramming operating systems. This is because multiprogramming involves executing multiple processes concurrently. CPU scheduling determines which process gets the CPU at any given time, ensuring efficient utilization of the CPU and maximizing system throughput.

Q199: To access the services of the operating system, the interface is provided by the _

- A) a) Library
- B) b) System calls
- C) c) Assembly instructions
- D) d) API

Correct: b) System calls

Explanation: System calls are the interface between an application and the operating system. They are essentially functions provided by the OS that can be called by programs to request services like file access, memory allocation, process creation, etc. Think of them as the gateway to the OS's core functionalities.

Q200: In Operating Systems, which of the following is/are CPU scheduling algorithms?

- A)** a) Priority
- B)** b) Round Robin
- C)** c) Shortest Job First
- D)** d) All of the mentioned

Correct: c) Shortest Job First

Explanation: An operating system (OS) is the fundamental software that manages a computer's hardware and software resources. It serves as an intermediary between the user and the computer, providing a user interface and controlling the execution of applications. Core Functions of an Operating System: Resource Management: Manages the CPU, memory, storage, and input/output devices efficiently. Allocates resources to different processes and applications. Handles resource sharing and conflict resolution. Process Management: Controls the creation, execution, and termination of processes. Manages the process lifecycle, including states like running, waiting, and ready. Implements scheduling algorithms to determine which process gets the CPU. Memory Management: Allocates and deallocates memory to processes. Handles memory protection to prevent unauthorized access. Implements memory swapping and paging techniques. File Management: Organizes and stores data on storage devices. Provides file creation, deletion, reading, and writing operations. Implements file systems to structure and manage files. Input/Output (I/O) Handling: Manages communication between the computer and external devices. Handles data transfer and device control. Provides buffering and caching mechanisms for efficient I/O operations. User Interface: Provides a way for users to interact with the computer. Can be command-line, graphical, or touch-based. Handles user input and displays system information. In essence, the operating system acts as the conductor of a complex orchestra, ensuring that all hardware and software components work together seamlessly to deliver the desired functionality to the user.

Q201: What is the main function of the command interpreter?

- A)** a) to provide the interface between the API and application program
- B)** b) to handle the files in the operating system
- C)** c) to get and execute the next user-specified command
- D)** d) none of the mentioned

Correct: c) to get and execute the next user-specified command

Explanation: A command interpreter translates user commands into actions for the operating system. It's the bridge between the user and the computer, allowing users to interact with

the system directly.

Q202: What is an operating system?

- A)** a) interface between the hardware and application programs
- B)** b) collection of programs that manages hardware resources
- C)** c) system service provider to the application programs
- D)** d) all of the mentioned

Correct: d) all of the mentioned

Explanation: An operating system is the core software that manages a computer's hardware and software resources, acting as an intermediary between users and the machine.

Q203: Which of following is HTML tag

- A)** (A) # and #
- B)** (B) { and }
- C)** (C) ! and ?
- D)** (D) < and >

Correct: (D) < and >

Q204: HTML is used to create __

- A)** (A) web page
- B)** (B) machine language program
- C)** (C) both
- D)** (D) None

Correct: A. web page

Q205: A program written in a high level language is referred to as :

- A) (A) Machine program
- B) (B) Assembly program
- C) (C) Source code

Correct: (C) Source code

Q206: What enables a computer to work smoothly with printers

- A) A. Drivers
- B) B. ROM
- C) C. RAM
- D) D. None

Correct: B. ROM

Explanation: The answer is A. Drivers. Here's why: Drivers act as translators between the computer and the printer. They take the data the computer sends (like a document you want to print) and convert it into a format the printer understands, allowing it to translate the digital information into a physical printout. ROM (Read-Only Memory) stores permanent data the computer needs to function but cannot be altered by the user. It wouldn't be involved in ongoing communication with a printer. RAM (Random Access Memory) stores temporary data the computer is currently working on. While RAM might be used to hold the print job data temporarily, it's not the key component enabling smooth operation.

Q207: Errors from computer hardware and software can be identified and removed by process:

- A) Interface
- B) Debugging
- C) Formatting
- D) Flip Flop

Correct: Debugging

Explanation: null

Q208: With which of the following all formulas in excel starts ?

- A) A) /
- B) B) *
- C) C) \$
- D) D) =

Correct: D) =

Explanation: In Microsoft Excel, all formulas must begin with an equal sign (=). This symbol tells Excel that the following content is a formula, not just plain text or data you've entered into the cell. Here's why the other options are not used to start formulas: A) /: This forward slash is often used as a division operator within formulas, but it cannot initiate them. **B) **: Asterisk (*) is another operator, typically used for multiplication within formulas. It also cannot start a formula. **C) \$: Dollarsign (\$) is used for various purposes in Excel, including absolute cell references. However, it's not used to initiate formulas. Remember, the equal sign (=) signals to Excel that you're about to provide a calculation or instruction, making it the essential starting point for all formulas.

Q209: In MS Excel, you have a list of sales data in column A, and you need to find the second highest unique value in this list. Which of the following formulas will correctly return the second highest unique value?

- A) A =LARGE(A:A, 2)
- B) B =LARGE(UNIQUE(A:A), 2)
- C) C =INDEX(SORT(UNIQUE(A:A), , -1), 2)
- D) D =SMALL(UNIQUE(A:A), 2)

Correct: C =INDEX(SORT(UNIQUE(A:A), , -1), 2)

Explanation: C. =INDEX(SORT(UNIQUE(A:A), , -1), 2) is the correct formula to find the second highest unique value in column A of your MS Excel data. Here's why each option works (or doesn't): A. =LARGE(A:A, 2): This formula uses the LARGE function, which returns the nth largest value in a range. However, it doesn't consider uniqueness. So, if there are duplicates of the highest value, it might not be the second truly unique highest value. B. =LARGE(UNIQUE(A:A), 2): This formula is on the right track! It uses UNIQUE to remove duplicates and then LARGE to find the second largest value within the unique list. However, there's a simpler way. C. =INDEX(SORT(UNIQUE(A:A), , -1), 2): This is the champion! It breaks down like this: UNIQUE(A:A) removes duplicates from column A. SORT(... , -1) sorts the unique values in descending order (largest to smallest) because -1 indicates descending order. INDEX(...) picks the value at a specific position (the second one in this case, indicated by

2). D. =SMALL(UNIQUE(A:A), 2): This formula uses SMALL which finds the nth smallest value. We need the highest unique value, not the smallest, so this isn't the answer. Therefore, formula C efficiently combines removing duplicates, sorting, and selecting the second largest value in a single expression.

Q210: Which of the following part of a processor contains the hardware necessary to perform all the operations required by a computer?

- A) a) Controller
- B) b) Registers
- C) c) Cache
- D) d) Data path

Correct: d) Data path

Explanation: d) Data path. The data path is the part of a processor that contains the hardware necessary to perform all the operations required by a computer. Here's why: Data path: This is the core execution unit of the processor. It consists of the Arithmetic Logic Unit (ALU) that performs mathematical and logical operations, and other functional units like shifters and registers that help manipulate and move data. It's essentially the "workstation" where all the calculations and processing happen. Controller: The controller acts as the brain of the CPU, fetching instructions from memory, decoding them, and directing the data path to perform the necessary operations. It tells the data path what to do, but it doesn't do the actual calculations itself. Registers: Registers are temporary storage locations within the CPU that hold data and instructions currently being processed. They provide fast access to frequently used data for the data path to work on. Cache: The cache is a small, high-speed memory that stores frequently accessed data and instructions closer to the processor. It helps improve performance by reducing the need to access slower main memory. The Teamwork of Processor Components Think of the processor as a team working together. The controller is the leader, giving instructions. The data path is the team of workers performing the calculations. Registers are like individual workbenches where the workers hold the data they're currently processing. And the cache is like a small toolbox close by, holding the most frequently used tools for quick access. While each component plays a crucial role, the data path is the heart of the operation, containing the essential hardware for executing all the calculations and instructions that make the computer function.

Q211: Which of the following is not a type of computer code?

- A) a) EDIC
- B) b) ASCII
- C) c) BCD

D) d) EBCDIC

Correct: a) EDIC

Explanation: a) EDIC is not a type of computer code. Here's a breakdown of the other options: ASCII (American Standard Code for Information Interchange): This is a widely used character encoding standard that assigns a unique binary code to represent letters, numbers, symbols, and control characters. It's a fundamental code for text representation in computers. BCD (Binary Coded Decimal): This is a method for representing decimal numbers (0-9) using binary digits (0s and 1s). It's not as common as pure binary representation but can be used in specific applications. EBCDIC (Extended Binary Coded Decimal Interchange Code): Similar to BCD, EBCDIC is another character encoding standard that uses 8-bit binary codes to represent characters. It was primarily used by IBM mainframe computers. What is EDIC? EDIC (Electronic Data Interchange) is not a code itself, but rather a protocol for exchanging data between computers in a standardized format. It defines the structure and format of electronic messages, ensuring compatibility between different systems. While EDIC interacts with computer code for data transmission, it doesn't specify the actual code used to represent the data. The data within EDIC messages could be encoded in ASCII, EBCDIC, or any other suitable character encoding scheme. In essence, EDIC focuses on how data is exchanged, while the other options (ASCII, BCD, EBCDIC) define how the data itself is represented using codes.

Q212: Which of the following monitor looks like a television and are normally used with non-portable computer systems?

A) a) LED

B) b) LCD

C) c) CRT

D) d) Flat Panel Monitors

Correct: c) CRT

Explanation: CRT monitors: These were the traditional type of monitors used with desktop computers for many years. They have a bulky, box-like design similar to older televisions. Inside, they use a cathode ray tube that fires electrons at a fluorescent screen to create the image. LED and LCD monitors: These are the more modern and dominant types of monitors today. They are flat-panel displays that use light-emitting diodes (LED) or liquid crystals (LCD) to generate the image. They are typically much thinner and lighter than CRT monitors. Flat Panel Monitors: This is a more general term that encompasses both LED and LCD monitors. While they are flat and sleek unlike CRTs, they still share the core functionality of displaying information for computers. The Evolution of Monitors CRT monitors were the standard for many years due to their affordability and decent picture quality. However, they had several drawbacks: Bulkier and heavier design Higher energy consumption Prone to flickering and eye strain Lower refresh rates With advancements in technology, LED and LCD monitors emerged, offering

significant advantages: Thinner and lighter design More energy efficient Sharper image quality Higher refresh rates Reduced eye strain As a result, CRT monitors have become largely obsolete, and LED/LCD monitors are the preferred choice for modern computer systems. So, while all the options (CRT, LED, LCD) are technically monitors, CRT monitors are the only ones that have the traditional bulky design resembling a television and were primarily used with non-portable desktops.

Q213: Which of the following unit is responsible for converting the data received from the user into a computer understandable format?

- A) a) Output Unit
- B) b) Input Unit
- C) c) Memory Unit
- D) d) Arithmetic & Logic Unit

Correct: b) Input Unit

Explanation: The input unit acts as the bridge between the user and the computer. It receives data in various forms, such as keystrokes, mouse clicks, microphone recordings, or data from external devices. The input unit doesn't actually understand the data itself. Its job is to convert the physical signals from these user inputs into a digital format that the computer can process. This digital format is typically binary code (sequences of 0s and 1s). Once converted, the input unit sends this digital data to the CPU for further processing. Here are some examples of input devices: Keyboard mouse

Q214: Which of the following is the smallest unit of data in a computer?

- A) a) Bit
- B) b) KB
- C) c) Nibble
- D) d) Byte

Correct: a) Bit

Explanation: Bit: A bit is the fundamental unit of information in a computer. It can hold only one of two values: 0 or 1. These binary digits represent the basic building blocks for all the data a computer stores and processes. KB (Kilobyte): Kilobyte is a unit of storage capacity equal to 1,024 bytes (not bits). It's a much larger unit compared to a single bit. Nibble: A nibble is a group of four bits (half a byte). While nibbles are sometimes used for specific purposes, they aren't the most fundamental unit. Byte: A byte is a group of eight bits (more common than

nibbles). It's the smallest addressable unit of memory in most computers, meaning you can't access individual bits within a byte for most operations. However, bytes are still larger than single bits. Bits: The Building Blocks of Data Think of bits like the individual letters of the alphabet. By combining these basic units (0s and 1s) in various sequences, computers can represent all the information they need, from text characters and numbers to images, videos, and complex programs. While bytes are the more commonly used unit for data storage and transfer, bits are the fundamental building blocks upon which everything is built in the digital world.

Q215: Which of the following is not a characteristic of a computer?

- A) a) Versatility
- B) b) Accuracy
- C) c) Diligence
- D) d) I.Q.

Correct: d) I.Q.

Explanation: Out of the listed options, I.Q. is not a characteristic of a computer. Computers are machines that can perform tasks as instructed by humans, but they don't have intelligence in the same way that humans do. They can't reason, learn, or understand concepts on their own. The other characteristics listed are all applicable to computers. Versatility: Computers can be used for a wide variety of tasks, from simple calculations to complex simulations. Accuracy: Computers can perform calculations and follow instructions with a very high degree of accuracy. Diligence: Computers can tirelessly perform tasks over and over again without getting tired or making mistakes

Q216: Which of the following is the brain of the computer?

- A) a) Central Processing Unit
- B) b) Memory
- C) c) Arithmetic and Logic unit
- D) d) Control unit

Correct: a) Central Processing Unit

Explanation: a) Central Processing Unit (CPU). The CPU is often referred to as the "brain" of the computer because it's the central component responsible for processing instructions and carrying out the core operations of the system. Here's a breakdown of why the other options are important but not quite the brain: b) Memory: Memory

stores data and instructions that the CPU needs to access, but it doesn't perform the actual processing. It's more like the computer's short-term memory or storage. c) Arithmetic and Logic Unit (ALU): The ALU is an essential part of the CPU that performs mathematical and logical operations. It's like the calculator within the brain, but it doesn't make decisions or control the overall flow of execution. d) Control Unit (CU): The CU is another crucial part of the CPU that fetches instructions from memory, decodes them, and directs the ALU to perform the necessary operations. It's like the conductor of the orchestra, but it still relies on the CPU as a whole to function. The CPU: The Mastermind The CPU is the central processing unit that combines the functionalities of the control unit and the ALU. It fetches instructions, decodes them, controls the flow of data, and performs the necessary calculations and operations. It's the decision-maker and the engine that drives the computer's processing power. While memory, ALU, and CU all play vital roles, the CPU acts as the central coordinator and processing unit, making it the most fitting analogy for the computer's brain.

Q217: Which of the following computer language is written in binary codes only?

- A) a) pascal
- B) b) machine language
- C) c) C
- D) d) C#

Correct: b) machine language

Explanation: b) machine language. Here's why: Machine language is the only language computers understand natively. It consists entirely of binary code, sequences of 0s and 1s, which directly correspond to the computer's internal operations. Pascal, C, and C# are all high-level programming languages. They are much easier for humans to read and write than machine code. However, they need to be translated into machine code by a compiler or interpreter before the computer can execute them. Why Machine Language is Special Machine language is the most fundamental language of computers. Each instruction in machine code corresponds to a specific operation the computer's hardware can perform. While it's efficient for the computer, it's very difficult and error-prone for humans to work with directly. The Role of Higher-Level Languages High-level languages like Pascal, C, and C# provide a more human-friendly way to write programs. They use keywords, variables, and control flow structures that are easier to understand than raw binary code. These languages then rely on compilers or interpreters to convert the code into machine code that the computer can execute. In summary, while machine language is the native tongue of computers, high-level languages offer a more practical and user-friendly way for humans to interact with them.

Q218: Which of the following language does the computer understand?

- A) a) Computer understands only C Language

- B) b) Computer understands only Assembly Language**
- C) c) Computer understands only Binary Language**
- D) d) Computer understands only BASIC**

Correct: c) Computer understands only Binary Language

Explanation: c) Computer understands only Binary Language. Here's a breakdown of why the other options are incorrect: a) Computer understands only C Language: C is a popular high-level programming language, but computers need this code translated into machine language (binary) before they can execute it. b) Computer understands only Assembly Language: Assembly is closer to machine code than C, but it still needs to be assembled into binary for the computer to understand. d) Computer understands only BASIC: BASIC is another high-level language that requires translation into binary for the computer to process. Why Binary? Computers are essentially electrical machines. They use electrical circuits with switches that can be either on (representing 1) or off (representing 0). By cleverly arranging these on/off states (bits), the computer can represent instructions, data, and all the information it needs to function. Higher-Level Languages: Making Life Easier While binary is the fundamental language of computers, it's incredibly tedious and error-prone for humans to write programs directly in binary. That's why we have higher-level languages like C, Python, Java, etc. These languages use more human-readable syntax, and then compilers or interpreters translate them into machine code that the computer can understand. In essence, binary is the only language the computer truly understands, but higher-level languages make it much more convenient for us to interact with computers.

Q219: What is the full form of CPU?

- A) a) Computer Processing Unit**
- B) b) Computer Principle Unit**
- C) c) Central Processing Unit**
- D) d) Control Processing Unit**

Correct: c) Central Processing Unit

Explanation: Explanation: CPU stands for Central Processing Unit. CPU is the part of a computer system that is mainly referred as the brain of the computer.

Q220: Which of the following is the correct definition of Computer?

- A) a) Computer is a machine or device that can be programmed to perform arithmetical or logic operation sequences automatically**

- B)** b) Computer understands only binary language which is written in the form of 0s & 1s
- C)** c) Computer is a programmable electronic device that stores, retrieves, and processes the data
- D)** d) All of the mentioned

Correct: d) All of the mentioned

Explanation: That's right! The correct definition of computer is: d) All of the mentioned. Here's why all the options contribute to a comprehensive definition of a computer: a) Computer is a machine or device that can be programmed to perform arithmetical or logic operation sequences automatically: This accurately describes the core functionality of a computer. It can follow a set of instructions (program) to perform calculations and make logical decisions. b) Computer understands only binary language which is written in the form of 0s & 1s: This is true at the hardware level. Internally, computers operate using a binary system where all data and instructions are represented by combinations of 0s and 1s. c) Computer is a programmable electronic device that stores, retrieves, and processes data: This highlights several crucial aspects of computers: Programmable: They can be instructed to perform different tasks based on the software they run. Electronic: They use electronic circuits and components to process information. Data storage and retrieval: They can store data (information) for later use and retrieve it when needed. Data processing: They can manipulate and transform data according to the program's instructions. Therefore, a complete definition of a computer should encompass all these elements. It's a programmable electronic device that understands binary language, stores and retrieves data, and processes information according to programmed instructions.

Q221: Pen plotters use:

- A)** Ink cartridges
- B)** Colored pencils
- C)** Toner cartridges
- D)** Liquid ink tanks

Correct: Toner cartridges

Q222: A program used to view web pages is called a:

- A)** (A) Search engine
- B)** (B) Browser
- C)** (C) Website

D) (D) Bookmark

Correct: (B) Browser

Q223: The World Wide Web was invented by:

A) (A) Bill Gates

B) (B) Steve Jobs

C) (C) Tim Berners-Lee

D) (D) Mark Zuckerberg

Correct: (C) Tim Berners-Lee

Q224: A device used to capture images from photographs and store them on a computer is called a:

A) (A) Scanner

B) (B) Digital Camera

C) (C) Printer

D) (D) DVD Drive

Correct: (A) Scanner

Q225: The main part of the computer that houses the motherboard, power supply, and drives is called the?

A) (A) Central Processing Unit (CPU)

B) (B) System Unit

C) (C) Hard Disk Drive (HDD)

D) (D) Random Access Memory (RAM)

Correct: (B) System Unit

Q226: A device used to display information on the screen is called a:

- A) (A) Scanner
- B) (B) Monitor
- C) (C) Projector
- D) (D) Speaker

Correct: (B) Monitor

Q227: The image depicts a pointing device called a:

- A) (A) Joystick
- B) (B) Touchpad
- C) (C) Mouse
- D) (D) Trackball

Correct: (C) Mouse

Q228: Which of the following is NOT a commonly used input device ?

- A) (A) Keyboard
- B) (B) Microphone
- C) (C) Printer
- D) (D) Scanner

Correct: (C) Printer

Q229: The first generation of computers used:

- A) Transistors
- B) Vacuum tubes
- C) Integrated circuits
- D) Microprocessors

Correct: Vacuum tubes

Explanation: null

Q230: The programming language COBOL was designed for:

- A) Game development
- B) Business applications
- C) Scientific calculations
- D) AI

Correct: Business applications

Explanation: null

Q231: The invention of the laser led to the development of:

- A) Hard disk drives
- B) Optical discs (CDs, DVDs)
- C) Magnetic tapes
- D) Random access memory

Correct: Optical discs (CDs, DVDs)

Explanation: null

Q232: The development of the personal computer revolutionized:

- A) Space exploration
- B) Home & office computing
- C) Weather forecasting
- D) Military applications

Correct: Home & office computing

Explanation: null

Q233: The term "social media" refers to online platforms that enable:

- A) E-commerce transactions
- B) Content sharing & communication
- C) Cloud storage services
- D) Video conferencing

Correct: Content sharing & communication

Explanation: null

Q234: The concept of a "search engine" is used to:

- A) Efficient internet browsing
- B) Protecting data
- C) Developing websites
- D) Sending emails

Correct: Efficient internet browsing

Explanation: null

Q235: The development of smartphones has blurred the lines between:

- A) PCs & laptops
- B) Phones & computers
- C) Laptops & tablets
- D) Tablets & desktops

Correct: Phones & computers

Explanation: null

Q236: The term "blockchain" is associated with:

- A) Securing online transactions
- B) Developing mobile apps
- C) Enhancing internet speed
- D) VR experiences

Correct: Securing online transactions

Explanation: null

Q237: Advances in quantum computing have the potential to revolutionize fields like:

- A) Social media networking
- B) Medicine & drug discovery
- C) Online gaming
- D) E-commerce platforms

Correct: Medicine & drug discovery

Explanation: null

Q238: The invention of the transistor revolutionized computers by:

- A) Increasing processing speed
- B) Reducing size & power consumption
- C) Enabling GUIs
- D) Introducing memory

Correct: Reducing size & power consumption

Explanation: null

Q239: The first commercially available computer, UNIVAC I, was used for:

- A) Personal computing
- B) Scientific calculations
- C) Census data analysis
- D) Video games

Correct: Census data analysis

Explanation: null

Q240: Integrated circuits (ICs), also known as microchips, were a hallmark of which computer generation?

- A) Integrated circuits (ICs)
- B) Transistors
- C) Vacuum tubes
- D) Microprocessors

Correct: Transistors

Explanation: null

Q241: The development of the IBM PC in the early 1980s marked the rise of:

- A) Mainframe computers
- B) Personal computers (PCs)
- C) Supercomputers
- D) Minicomputers

Correct: Personal computers (PCs)

Explanation: null

Q242: The graphical user interface (GUI), popularized by the Apple Macintosh,

made computers easier to use for:

- A) Programmers
- B) Engineers
- C) Non-technical users
- D) Scientists

Correct: Non-technical users

Explanation: null

Q243: The World Wide Web (WWW) was invented by:

- A) Bill Gates
- B) Steve Jobs
- C) Tim Berners-Lee
- D) Dennis Ritchie

Correct: Tim Berners-Lee

Explanation: null

Q244: The first high-level programming language, FORTRAN, was designed for:

- A) Web development
- B) Scientific computing
- C) Operating systems
- D) Game development

Correct: Scientific computing

Explanation: null

Q245: The development of the microprocessor led to the creation of:

- A) Mainframe computers

- B) Personal computers
- C) Supercomputers
- D) All of the above

Correct: All of the above

Explanation: null

Q246: The term "cloud computing" refers to:

- A) Weather forecasting
- B) Accessing resources over internet
- C) Storing data remotely
- D) Online collaboration tools

Correct: Accessing resources over internet

Explanation: null

Q247: Artificial intelligence (AI) research focuses on:

- A) Making computers faster
- B) Creating intelligent machines
- C) Programming languages
- D) User interface design

Correct: Creating intelligent machines

Explanation: null

Q248: Which of the following is NOT a storage device?

- A) Hard Disk Drive (HDD)
- B) Solid State Drive (SSD)

C) Random Access Memory (RAM)

D) Optical Disc

Correct: Random Access Memory (RAM)

Explanation: null

Q249: Vacuum tubes were the primary technology used in computers of which generation?

A) Transistors

B) Vacuum tubes

C) Integrated circuits

D) Microprocessors

Correct: Vacuum tubes

Explanation: null

Q250: The invention of the transistor revolutionized computers by:

A) Increasing processing speed

B) Reducing size & power consumption

C) Enabling GUIs

D) Introducing memory

Correct: Reducing size & power consumption

Explanation: null

Q251: The first commercially available computer, UNIVAC I, was used for:

A) Personal computing

B) Scientific calculations

C) Census data analysis

D) Video games

Correct: Census data analysis

Explanation: null

Q252: Integrated circuits (ICs), also known as microchips, were a hallmark of which computer generation?

A) Integrated circuits (ICs)

B) Transistors

C) Vacuum tubes

D) Mainframe computers

Correct: Integrated circuits (ICs)

Explanation: null

Q253: The 1980s marked the rise of:

A) Mainframe computers

B) Personal computers

C) Supercomputers

D) Minicomputers

Correct: Personal computers

Explanation: null

1980s marked the rise of:

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