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QUESTION BANK



UNIT-1
FUNDAMENTAL OF COMPUTER

APPROX.
450
MCQs
WITH ANSWERS

BEST FOR EXAM PREPARATION

CLASS BY :-
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Write by
AJAY SIR

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Unit – 1 Fundamental of Computer

Chapter 1: Introduction to Computer

30 Multiple Choice Questions (MCQs)

Q1. Who is known as the Father of Computer?
A. Alan Turing B. Charles Babbage C. Bill Gates D. Steve Jobs
Answer: B. Charles Babbage
Explanation: Charles Babbage designed the Analytical Engine, which became the foundation of modern computers. Therefore, he is known as the Father of Computer.

Q2. What is a computer?
A. A mechanical device only
B. An electronic data processing device
C. A communication device only
D. A storage device only
Answer: B. An electronic data processing device
Explanation: A computer is an electronic device that accepts data as input, processes it according to instructions, stores it when required, and produces meaningful output.

Q3. Which of the following is the basic working cycle of a computer?
A. Read → Write → Print
B. Input → Process → Output
C. Input → Save → Delete
D. Process → Store → Delete
Answer: B. Input → Process → Output
Explanation: Every computer follows the IPO cycle, where data is entered, processed, and then presented as output.

Q4. Which of the following is NOT a characteristic of a computer?
A. Speed B. Accuracy C. Intelligence D. Diligence
Answer: C. Intelligence
Explanation: Computers do not possess natural intelligence. They perform tasks based only on programmed instructions.

Q5. Which of the following is an electronic computer?
A. Abacus B. Slide Rule C. Desktop Computer D. Napier's Bones
Answer: C. Desktop Computer
Explanation: A desktop computer is an electronic computing device, while the others are manual or mechanical calculating tools.

Q6. The word "Computer" is derived from which Latin word?
A. Computare B. Computus C. Computerium D. Computo
Answer: A. Computare
Explanation: The Latin word **Computare** means "to calculate" or "to compute."

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Q7. What is the primary function of a computer?
A. Playing games
B. Processing data
C. Watching videos
D. Browsing the Internet
Answer: B. Processing data
Explanation: The primary purpose of a computer is to process data into useful information.

Q8. A computer works according to _____.
A. Human emotions
B. Programmed instructions
C. Personal opinions
D. Guesswork
Answer: B. Programmed instructions
Explanation: A computer executes instructions written in programs to perform tasks.

Q9. Which of the following best describes a computer?
A. A thinking machine
B. An electronic data processing device
C. A calculator only
D. A communication device only
Answer: B. An electronic data processing device
Explanation: A computer processes data electronically to generate useful information.

Q10. Which sequence correctly represents the data processing cycle?
A. Process → Output → Input
B. Input → Process → Output
C. Output → Process → Input
D. Store → Process → Output
Answer: B. Input → Process → Output
Explanation: Data is entered into the computer, processed by the CPU, and then presented as output.

Q11. Which of the following is known as the "brain" of a computer?
A. Monitor
B. CPU
C. Keyboard
D. Mouse
Answer: B. CPU
Explanation: The Central Processing Unit (CPU) controls and processes all operations performed by the computer.

Q12. Which of the following is an example of data?
A. Processed report
B. Raw facts and figures
C. Final result
D. Printed document
Answer: B. Raw facts and figures
Explanation: Data consists of unprocessed facts and figures that become information after processing.

Q13. Information is _____.
A. Raw facts
B. Processed data
C. Unprocessed numbers
D. Random symbols
Answer: B. Processed data
Explanation: Information is the meaningful result obtained after processing raw data.

Q14. Which of the following is NOT a basic operation of a computer?
A. Input
B. Processing
C. Output
D. Breathing
Answer: D. Breathing
Explanation: Computers perform input, processing, storage, and output operations but cannot breathe.

Q15. Which feature enables a computer to perform millions of calculations per second?
A. Storage
B. Speed
C. Intelligence
D. Memory
Answer: B. Speed
Explanation: Computers can execute millions or even billions of instructions every second.

Q16. Which characteristic allows a computer to produce error-free results?
A. Diligence
B. Accuracy
C. Automation
D. Storage
Answer: B. Accuracy
Explanation: Computers provide highly accurate results if the input data and instructions are correct.

Q17. A computer can work continuously without getting tired. This characteristic is called _____.
A. Speed
B. Automation
C. Diligence
D. Versatility
Answer: C. Diligence
Explanation: Computers can perform repetitive tasks continuously without fatigue.

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Q18. Which characteristic enables a computer to perform different types of tasks?
A. Accuracy B. Speed C. Versatility D. Storage
Answer: C. Versatility
Explanation: Versatility means a computer can perform a wide variety of tasks efficiently.
Q19. Which generation computer introduced the microprocessor?
A. First Generation B. Second Generation
C. Third Generation D. Fourth Generation
Answer: D. Fourth Generation
Explanation: Fourth-generation computers use microprocessors, making them smaller, faster, and more reliable.
Q20. Which of the following is NOT an application of computers?
A. Banking B. Education C. Healthcare D. Photosynthesis
Answer: D. Photosynthesis
Explanation: Photosynthesis is a natural biological process and is not an application of computers.
Q21. Computers are widely used in _____.
A. Education B. Banking C. Business D. All of the above
Answer: D. All of the above
Explanation: Computers are used in almost every field, including education, banking, healthcare, business, and entertainment.
Q22. Which of the following is a limitation of a computer?
A. High speed B. High accuracy
C. Cannot think independently D. Large storage capacity
Answer: C. Cannot think independently
Explanation: A computer cannot make decisions on its own. It works only according to programmed instructions.
Q23. Which of the following requires a computer to function?
A. Instructions B. Electricity C. Hardware D. All of the above
Answer: D. All of the above
Explanation: A computer requires hardware, electrical power, and instructions (software) to perform operations.
Q24. Which of the following converts data into meaningful information?
A. Printer B. CPU C. Mouse D. Scanner
Answer: B. CPU
Explanation: The CPU processes raw data and converts it into useful information.
Q25. Which of the following is the correct full form of CPU?
A. Central Program Unit B. Central Processing Unit
C. Computer Processing Unit D. Central Power Unit
Answer: B. Central Processing Unit
Explanation: CPU stands for **Central Processing Unit**, the main processing component of a computer.
Q26. A computer follows the instructions stored in _____.
A. Software B. Paper C. Printer D. Scanner
Answer: A. Software
Explanation: Software contains the instructions that tell the computer what tasks to perform.
Q27. Which of the following is considered the smallest unit of data?
A. Byte B. Bit C. Kilobyte D. Nibble
Answer: B. Bit
Explanation: A bit (Binary Digit) is the smallest unit of data in a computer and can have a value of either 0 or 1.
Q28. Which device is commonly used to enter data into a computer?
A. Monitor B. Keyboard C. Speaker D. Printer
Answer: B. Keyboard
Explanation: A keyboard is the most commonly used input device for entering data and commands.

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Q29. Which of the following is an output device?
A. Mouse B. Keyboard C. Monitor D. Scanner
Answer: C. Monitor
Explanation: A monitor displays processed information visually, making it an output device.
Q30. Which statement is TRUE about a computer?
A. It can think like a human.
B. It never makes mistakes, even with incorrect input.
C. It works according to instructions given by the user or software.
D. It can operate without hardware.
Answer: C. It works according to instructions given by the user or software.
Explanation: A computer performs tasks by following programmed instructions. Its output depends on the correctness of the input and the instructions provided.

Chapter 2: History of Computer

30 Multiple Choice Questions (MCQs)

Q1. Which was the earliest known calculating device?
A. Calculator B. Abacus C. Pascaline D. ENIAC
Answer: B. Abacus
Explanation: The Abacus, developed around 3000 BC, is considered the earliest known calculating device used for basic arithmetic operations.
Q2. The Abacus was first developed in which country?
A. India B. China C. Japan D. Greece
Answer: B. China
Explanation: The Abacus is believed to have originated in ancient China and was widely used for counting and calculations.
Q3. Who invented Napier's Bones?
A. Blaise Pascal B. John Napier C. Charles Babbage D. Gottfried Leibniz
Answer: B. John Napier
Explanation: John Napier invented Napier's Bones in 1617 to simplify multiplication and division.
Q4. Napier's Bones was mainly used for _____.
A. Playing games B. Multiplication and Division
C. Drawing graphs D. Storing data
Answer: B. Multiplication and Division
Explanation: Napier's Bones was a manual calculating tool designed to perform multiplication and division more easily.
Q5. Who invented the Slide Rule?
A. William Oughtred B. Charles Babbage
C. John Napier D. Herman Hollerith
Answer: A. William Oughtred
Explanation: William Oughtred invented the Slide Rule in 1622, which was widely used by engineers and scientists before electronic calculators.
Q6. Who invented the Pascaline?
A. John Napier B. Blaise Pascal C. Charles Babbage D. Alan Turing
Answer: B. Blaise Pascal

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Explanation: Blaise Pascal invented the Pascaline in 1642 to help his father perform tax calculations.

Q7. The Pascaline could perform which operations?

A. Addition and Subtraction B. Multiplication only
C. Division only D. All arithmetic operations

Answer: A. Addition and Subtraction

Explanation: The Pascaline was a mechanical calculator designed mainly for addition and subtraction.

Q8. Who invented the Stepped Reckoner?

A. Charles Babbage B. Blaise Pascal
C. Gottfried Wilhelm Leibniz D. Herman Hollerith

Answer: C. Gottfried Wilhelm Leibniz

Explanation: Leibniz developed the Stepped Reckoner, which could perform addition, subtraction, multiplication, and division.

Q9. Which invention introduced automatic multiplication and division?

A. Abacus B. Pascaline C. Stepped Reckoner D. ENIAC

Answer: C. Stepped Reckoner

Explanation: The Stepped Reckoner improved upon earlier calculators by performing multiplication and division automatically.

Q10. Who is known as the Father of Computer?

A. Alan Turing B. Charles Babbage C. John Napier D. Herman Hollerith

Answer: B. Charles Babbage

Explanation: Charles Babbage designed the Analytical Engine, which became the foundation of modern computers.

Q11. Which machine designed by Charles Babbage is considered the first mechanical computer?

A. Pascaline B. Difference Engine C. ENIAC D. UNIVAC

Answer: B. Difference Engine

Explanation: The Difference Engine was designed to perform mathematical calculations automatically.

Q12. Which machine of Charles Babbage introduced the concepts of memory and processor?

A. Difference Engine B. Analytical Engine
C. Pascaline D. Mark I

Answer: B. Analytical Engine

Explanation: The Analytical Engine included features similar to modern computers, such as memory, processing unit, and input/output.

Q13. Who is known as the world's first computer programmer?

A. Grace Hopper B. Ada Lovelace C. Alan Turing D. Blaise Pascal

Answer: B. Ada Lovelace

Explanation: Ada Lovelace wrote the first algorithm intended for the Analytical Engine and is recognized as the first computer programmer.

Q14. Ada Lovelace worked with _____.

A. John Napier B. Charles Babbage C. Herman Hollerith D. Bill Gates

Answer: B. Charles Babbage

Explanation: Ada Lovelace collaborated with Charles Babbage and developed algorithms for his Analytical Engine.

Q15. Who invented the Punch Card machine?

A. Herman Hollerith B. Alan Turing C. Blaise Pascal D. John Napier

Answer: A. Herman Hollerith

Explanation: Herman Hollerith developed the Punch Card Tabulating Machine for the 1890 U.S. Census.

Q16. Punch cards were mainly used for _____.

A. Printing documents B. Storing and processing data
C. Internet access D. Playing games

Answer: B. Storing and processing data

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Explanation: Punch cards stored data in the form of holes and were used for data processing.

Q17. Herman Hollerith's machine was first used in the _____.

A. 1880 U.S. Census B. 1890 U.S. Census
C. 1900 U.S. Census D. 1910 U.S. Census

Answer: B. 1890 U.S. Census

Explanation: His tabulating machine greatly reduced the time required to process census data.

Q18. Which company was founded by Herman Hollerith and later became IBM?

A. Apple B. Microsoft
C. Tabulating Machine Company D. Intel

Answer: C. Tabulating Machine Company

Explanation: Hollerith's company later evolved into International Business Machines (IBM).

Q19. Who proposed the concept of a universal computing machine?

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

Answer: B. Alan Turing

Explanation: Alan Turing proposed the theoretical Turing Machine, which became the basis of computer science.

Q20. Alan Turing is regarded as the father of _____.

A. Internet B. Artificial Intelligence and Theoretical Computer Science
C. Database D. Networking

Answer: B. Artificial Intelligence and Theoretical Computer Science

Explanation: Alan Turing made significant contributions to theoretical computing and artificial intelligence.

Q21. Which was the first general-purpose electronic digital computer?

A. UNIVAC I B. ENIAC C. EDVAC D. IBM PC

Answer: B. ENIAC

Explanation: ENIAC, completed in 1945, is considered the first general-purpose electronic digital computer.

Q22. ENIAC was developed by _____.

A. Charles Babbage and Ada Lovelace B. John Mauchly and J. Presper Eckert
C. Bill Gates and Paul Allen D. Steve Jobs and Steve Wozniak

Answer: B. John Mauchly and J. Presper Eckert

Explanation: ENIAC was designed by John Mauchly and J. Presper Eckert at the University of Pennsylvania

Q23. What does ENIAC stand for?

A. Electronic Numerical Integrator and Computer
B. Electronic Network Integrated Automatic Computer
C. Electronic Numeric Information Access Computer
D. Electronic National Internet Access Center

Answer: A. Electronic Numerical Integrator and Computer

Explanation: ENIAC was one of the earliest electronic digital computers and its full form is Electronic Numerical Integrator and Computer.

Q24. Which computer introduced the stored-program concept?

A. ENIAC B. EDVAC C. UNIVAC I D. Mark I

Answer: B. EDVAC

Explanation: EDVAC introduced the stored-program concept, allowing instructions and data to be stored in memory.

Q25. What does EDVAC stand for?

A. Electronic Discrete Variable Automatic Computer
B. Electronic Digital Variable Automatic Computer
C. Electronic Data Variable Automatic Calculator
D. Electronic Digital Virtual Automatic Computer

Answer: A. Electronic Discrete Variable Automatic Computer

Explanation: EDVAC was an early computer that improved upon ENIAC by using stored programs.

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Q26. Which was the first commercially successful computer?
A. ENIAC B. EDVAC C. UNIVAC I D. IBM 701
Answer: C. UNIVAC I
Explanation: UNIVAC I was the first commercially produced computer available for business and government use.
Q27. UNIVAC stands for _____.
A. Universal Automatic Computer B. Universal Automated Calculator
C. Unified Automatic Computer D. Universal Arithmetic Computer
Answer: A. Universal Automatic Computer
Explanation: UNIVAC stands for Universal Automatic Computer and was introduced in 1951.
Q28. Which computer correctly predicted the 1952 U.S. Presidential Election?
A. ENIAC B. EDVAC C. UNIVAC I D. IBM PC
Answer: C. UNIVACI
Explanation: UNIVACI gained fame after accurately predicting the outcome of the 1952 U.S. Presidential Election.
Q29. Which invention laid the foundation for modern programmable computers?
A. Abacus B. Analytical Engine C. Pascaline D. Slide Rule
Answer: B. Analytical Engine
Explanation: The Analytical Engine introduced the concepts of a processor, memory, input, and output, making it the blueprint for modern computers.
Q30. Which sequence correctly represents the historical development of calculating devices?
A. Pascaline → Abacus → ENIAC → Analytical Engine
B. Abacus → Napier's Bones → Pascaline → Analytical Engine → ENIAC
C. ENIAC → UNIVAC → Abacus → Pascaline
D. Analytical Engine → Abacus → ENIAC → Slide Rule
Answer: B. Abacus → Napier's Bones → Pascaline → Analytical Engine → ENIAC
Explanation: The evolution of computers began with the **Abacus**, followed by **Napier's Bones**, **Pascaline**, **Analytical Engine**, and finally electronic computers such as **ENIAC**.

Chapter 3: Generation of Computer

30 Multiple Choice Questions (MCQs)

Q1. How many generations of computers are commonly recognized?
A. Three B. Four C. Five D. Six
Answer: C. Five
Explanation: Computers are commonly classified into five generations based on the major technology used, such as vacuum tubes, transistors, integrated circuits, microprocessors, and artificial intelligence.
Q2. The First Generation of computers was based on _____.
A. Transistors B. Vacuum Tubes C. Integrated Circuits D. Microprocessors
Answer: B. Vacuum Tubes
Explanation: First-generation computers (1940–1956) used vacuum tubes as their primary electronic components.
Q3. Which period is associated with the First Generation of computers?
A. 1940–1956 B. 1956–1963 C. 1964–1971 D. 1971–Present
Answer: A. 1940–1956
Explanation: The first generation of computers existed approximately between 1940 and 1956 and used vacuum tube technology.
Q4. Which of the following is an example of a First Generation computer?
A. IBM PC B. ENIAC C. Apple Macintosh D. Pentium Compute
Answer: B. ENIAC
Explanation: ENIAC is one of the most well-known first-generation computers and used thousands of vacuum tubes.

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Q5. Which programming language was mainly used in First Generation computers?
A. C B. Assembly Language C. Machine Language D. Java
Answer: C. Machine Language
Explanation: First-generation computers were programmed using machine language, which consists of binary digits (0 and 1).

Q6. A major disadvantage of First-Generation computers was _____.
A. Small storage capacity B. High power consumption
C. Wireless communication D. Touchscreen support
Answer: B. High power consumption
Explanation: Vacuum tubes consumed a large amount of electricity and generated excessive heat.

Q7. Which technology replaced vacuum tubes in the Second Generation?
A. Integrated Circuits B. Transistors
C. Microprocessors D. Artificial Intelligence
Answer: B. Transistors
Explanation: Transistors replaced vacuum tubes, making computers smaller, faster, and more reliable.

Q8. The Second Generation of computers was developed during _____.
A. 1940–1956 B. 1956–1963 C. 1964–1971 D. 1971–1985
Answer: B. 1956–1963
Explanation: The second generation introduced transistor technology between 1956 and 1963.

Q9. Which language became popular during the Second Generation?
A. Java B. Python C. FORTRAN and COBOL D. HTML
Answer: C. FORTRAN and COBOL
Explanation: High-level programming languages such as FORTRAN and COBOL became popular during the second generation.

Q10. Which of the following is an example of a Second-Generation computer?
A. IBM 1401 B. ENIAC C. IBM PC D. Apple II
Answer: A. IBM 1401
Explanation: IBM 1401 was a transistor-based second-generation computer widely used in business applications.

Q11. The Third Generation of computers used _____.
A. Vacuum Tubes B. Transistors C. Integrated Circuits (ICs) D. Microprocessors
Answer: C. Integrated Circuits (ICs)
Explanation: Third-generation computers replaced transistors with integrated circuits, improving speed and reliability.

Q12. The Third Generation of computers existed during _____.
A. 1940–1956 B. 1956–1963 C. 1964–1971 D. 1971–Present
Answer: C. 1964–1971
Explanation: Integrated circuit technology defined the third generation from 1964 to 1971.

Q13. Which operating system became common during the Third Generation?
A. DOS B. Windows 11
C. Time-Sharing Operating System D. Android
Answer: C. Time-Sharing Operating System
Explanation: Time-sharing operating systems allowed multiple users to access a computer simultaneously.

Q14. Which of the following is an example of a Third-Generation computer?
A. IBM System/360 B. ENIAC C. IBM 1401 D. UNIVAC I
Answer: A. IBM System/360
Explanation: IBM System/360 is one of the most famous third-generation computers.

Q15. The Fourth Generation of computers is based on _____.
A. Vacuum Tubes B. Transistors C. Integrated Circuits D. Microprocessors
Answer: D. Microprocessors

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Explanation: The fourth generation introduced microprocessors, making computers smaller, faster, and more affordable.

Q16. The Fourth Generation began in _____.

A. 1964 B. 1971 C. 1985 D. 1995

Answer: B. 1971

Explanation: The invention of the microprocessor in 1971 marked the beginning of the fourth generation.

Q17. Which company developed the first commercial microprocessor?

A. Microsoft B. Intel C. IBM D. Apple

Answer: B. Intel

Explanation: Intel introduced the Intel 4004, the world's first commercial microprocessor, in 1971.

Q18. Which was the first commercial microprocessor?

A. Intel 8086 B. Intel 4004 C. Intel Pentium D. Intel Core i3

Answer: B. Intel 4004

Explanation: Intel 4004 was the first commercially available microprocessor.

Q19. Which of the following is an example of a Fourth-Generation computer?

A. IBM PC B. ENIAC C. IBM 1401 D. UNIVAC I

Answer: A. IBM PC

Explanation: IBM PC is a well-known fourth-generation computer based on microprocessor technology.

Q20. Personal computers became popular during the _____ generation.

A. First B. Second C. Third D. Fourth

Answer: D. Fourth

Explanation: The development of microprocessors made personal computers affordable and widely available.

Q21. The Fifth Generation of computers is mainly based on _____.

A. Vacuum Tubes B. Transistors

C. Artificial Intelligence (AI) D. Integrated Circuits

Answer: C. Artificial Intelligence (AI)

Explanation: Fifth-generation computers focus on artificial intelligence, machine learning, and intelligent systems.

Q22. Which technology is most closely associated with the Fifth Generation?

A. Machine Learning B. Artificial Intelligence

C. Robotics D. All of the above

Answer: D. All of the above

Explanation: The fifth generation includes AI, machine learning, robotics, natural language processing, and expert systems.

Q23. Which generation introduced Very Large-Scale Integration (VLSI)?

A. First B. Second C. Third D. Fourth

Answer: D. Fourth

Explanation: VLSI technology enabled thousands and later millions of transistors to be integrated onto a single chip.

Q24. Which generation introduced Ultra Large-Scale Integration (ULSI)?

A. First B. Second C. Fourth D. Fifth

Answer: D. Fifth

Explanation: Fifth-generation computers use advanced ULSI technology, allowing billions of transistors on a chip.

Q25. Which generation provides the highest processing speed?

A. First B. Second C. Third D. Fifth

Answer: D. Fifth

Explanation: Fifth-generation computers use advanced processors, AI, and parallel processing to achieve extremely high performance.

Q26. Which generation introduced Graphical User Interfaces (GUI) in personal computing?

A. First B. Second C. Third D. Fourth

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Answer: D. Fourth

Explanation: Graphical User Interfaces became widely available with fourth-generation personal computers.

Q27. Which generation is still continuing today?

A. First B. Second C. Fourth D. Fifth

Answer: D. Fifth

Explanation: The fifth generation is the current era of computing, focusing on AI and intelligent applications.

Q28. Which of the following is NOT a characteristic of the Fifth Generation?

A. Artificial Intelligence B. Natural Language Processing

C. Machine Learning D. Vacuum Tubes

Answer: D. Vacuum Tubes

Explanation: Vacuum tubes were used only in the first generation and are not part of modern fifth-generation computers.

Q29. Which generation of computers was the largest in physical size?

A. First Generation B. Second Generation C. Third Generation D. Fourth Generation

Answer: A. First Generation

Explanation: First-generation computers occupied entire rooms because of the large number of vacuum tubes they contained.

Q30. Which of the following correctly matches the computer generation with its technology?

A. First – Transistors B. Second – Vacuum Tubes

C. Third – Integrated Circuits D. Fourth – Vacuum Tubes

Answer: C. Third – Integrated Circuits

Explanation: The correct sequence is:

- **First Generation** – Vacuum Tubes
- **Second Generation** – Transistors
- **Third Generation** – Integrated Circuits (ICs)
- **Fourth Generation** – Microprocessors
- **Fifth Generation** – Artificial Intelligence (AI)

Chapter 4: Characteristics of Computer

30 Multiple Choice Questions (MCQs)

Q1. Which of the following is a characteristic of a computer?

A. Intelligence B. Speed C. Emotions D. Creativity

Answer: B. Speed

Explanation: A computer performs millions or even billions of operations in a very short time, making speed one of its most important characteristics.

Q2. Which characteristic enables a computer to perform calculations very quickly?

A. Accuracy B. Storage C. Speed D. Reliability

Answer: C. Speed

Explanation: Computers can execute millions of instructions per second, making them much faster than humans in performing calculations.

Q3. Which characteristic allows a computer to produce correct results?

A. Accuracy B. Diligence C. Automation D. Versatility

Answer: A. Accuracy

Explanation: A computer provides accurate results if the input data and program instructions are correct.

Q4. The accuracy of a computer mainly depends on _____.

A. The monitor B. The printer

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C. Correct input and instructions D. The keyboard color

Answer: C. Correct input and instructions

Explanation: A computer follows the principle of **Garbage In, Garbage Out (GIGO)**. Incorrect input leads to incorrect output.

Q5. Which characteristic allows a computer to work continuously without getting tired?

A. Automation B. Diligence C. Storage D. Intelligence

Answer: B. Diligence

Explanation: A computer can perform repetitive tasks continuously without fatigue or loss of performance.

Q6. Which characteristic means a computer can perform different kinds of tasks?

A. Accuracy B. Versatility C. Speed D. Reliability

Answer: B. Versatility

Explanation: A computer can be used for education, business, banking, entertainment, research, and many other applications.

Q7. Which characteristic allows a computer to perform tasks automatically after receiving instructions?

A. Reliability B. Automation C. Speed D. Memory

Answer: B. Automation

Explanation: Once a program starts, a computer can complete the task automatically without continuous human intervention.

Q8. Which characteristic refers to the ability of a computer to store a large amount of data?

A. Storage Capacity B. Accuracy C. Diligence D. Intelligence

Answer: A. Storage Capacity

Explanation: Computers can store vast amounts of data and retrieve it quickly whenever required.

Q9. Which characteristic makes a computer dependable for repeated tasks?

A. Reliability B. Automation C. Versatility D. Creativity

Answer: A. Reliability

Explanation: A computer can repeatedly perform the same task with consistent and dependable results.

Q10. Which characteristic means a computer can remember data for future use?

A. Storage Capacity B. Speed C. Diligence D. Intelligence

Answer: A. Storage Capacity

Explanation: Computers can store data in memory or storage devices and retrieve it whenever needed.

Q11. Which characteristic enables a computer to perform multiple types of applications?

A. Versatility B. Accuracy C. Diligence D. Automation

Answer: A. Versatility

Explanation: A single computer can be used for programming, gaming, accounting, education, design, and communication.

Q12. Which of the following is NOT a characteristic of a computer?

A. Speed B. Accuracy C. Natural Intelligence D. Reliability

Answer: C. Natural Intelligence

Explanation: A computer has no natural intelligence and cannot think or make decisions independently.

Q13. Which characteristic helps computers complete repetitive calculations without errors?

A. Diligence B. Speed C. Reliability D. All of the above

Answer: D. All of the above

Explanation: Speed, diligence, and reliability together enable computers to perform repetitive tasks efficiently and accurately.

Q14. Computers never become tired because of their _____.

A. Intelligence B. Diligence C. Creativity D. Emotions

Answer: B. Diligence

Explanation: Unlike humans, computers do not suffer from fatigue and can work continuously.

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Q15. Which characteristic enables a computer to process huge volumes of data quickly?
A. Accuracy B. Speed C. Automation D. Memory
Answer: B. Speed
Explanation: High processing speed allows computers to handle large amounts of data efficiently.

Q16. Which characteristic allows a computer to produce the same result every time for the same input?
A. Reliability B. Creativity C. Emotions D. Intelligence
Answer: A. Reliability
Explanation: A computer consistently produces the same output for the same input and instructions.

Q17. Which principle is related to the accuracy of computer output?
A. CPU Principle B. IPO Cycle
C. GIGO (Garbage In, Garbage Out) D. AI Principle
Answer: C. GIGO (Garbage In, Garbage Out)
Explanation: If incorrect data is entered into a computer, the output will also be incorrect.

Q18. Which of the following is an advantage of a computer's storage capacity?
A. Stores only text files B. Stores large amounts of data securely
C. Cannot retrieve stored data D. Stores data for one day only
Answer: B. Stores large amounts of data securely
Explanation: Modern computers can store huge amounts of data and retrieve it efficiently.

Q19. A computer can perform calculations 24 hours a day without losing efficiency because of _____.
A. Intelligence B. Diligence C. Creativity D. Emotions
Answer: B. Diligence
Explanation: Computers can operate continuously without becoming tired or bored.

Q20. Which characteristic enables a computer to perform banking, education, and healthcare tasks?
A. Accuracy B. Versatility C. Speed D. Reliability
Answer: B. Versatility
Explanation: Versatility allows computers to be used in many different fields and industries.

Q21. Which characteristic allows a computer to perform tasks without continuous supervision?
A. Automation B. Storage C. Reliability D. Accuracy
Answer: A. Automation
Explanation: After instructions are given, computers can automatically complete tasks without further human assistance.

Q22. Which of the following best describes the reliability of a computer?
A. It always guesses correctly. B. It produces consistent results.
C. It has emotions. D. It never requires electricity.
Answer: B. It produces consistent results.
Explanation: Reliability means a computer consistently performs tasks correctly under the same conditions.

Q23. Which characteristic makes computers suitable for scientific research?
A. High speed and accuracy B. Emotions
C. Creativity only D. Manual operation
Answer: A. High speed and accuracy
Explanation: Scientific research requires precise and fast calculations, which computers provide efficiently.

Q24. Which characteristic is most useful in online banking transactions?
A. Speed and Accuracy B. Emotions
C. Creativity D. Guesswork
Answer: A. Speed and Accuracy
Explanation: Banking systems depend on computers for fast and accurate transaction processing.

Q25. Which characteristic enables a computer to perform millions of operations in one second?
A. Storage B. Speed C. Intelligence D. Reliability

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Answer: B. Speed
Explanation: Modern processors execute millions or billions of instructions per second.

Q26. Why is a computer considered a reliable machine?
A. It can think like humans.
B. It gives consistent results with correct input.
C. It never requires maintenance.
D. It repairs itself automatically.
Answer: B. It gives consistent results with correct input.
Explanation: A computer reliably performs the same operation repeatedly without changing the result.

Q27. Which characteristic is demonstrated when a computer performs payroll calculations every month without mistakes?
A. Diligence B. Versatility C. Creativity D. Intelligence
Answer: A. Diligence
Explanation: Computers can repeat the same task for long periods without losing accuracy or efficiency.

Q28. Which characteristic allows a computer to store photos, videos, and documents?
A. Storage Capacity B. Automation C. Diligence D. Speed
Answer: A. Storage Capacity
Explanation: Hard disks, SSDs, and other storage devices enable computers to store various types of digital data.

Q29. Which of the following is a limitation rather than a characteristic of a computer?
A. Speed B. Accuracy C. Cannot think independently D. Reliability
Answer: C. Cannot think independently
Explanation: A computer cannot make decisions on its own. It works only according to programmed instructions, making this a limitation rather than a characteristic.

Q30. Which combination includes only characteristics of a computer?
A. Speed, Accuracy, Diligence, Versatility
B. Intelligence, Emotions, Creativity, Speed
C. Memory, Emotions, Guesswork, Accuracy
D. Creativity, Intelligence, Automation, Emotions
Answer: A. Speed, Accuracy, Diligence, Versatility
Explanation: The main characteristics of a computer include **Speed, Accuracy, Diligence, Automation, Reliability, Versatility, and Storage Capacity**. These features make computers efficient and suitable for a wide range of applications.

Chapter 5: Types of Computers

30 Multiple Choice Questions (MCQs)

Q1. Computers are commonly classified into how many main types based on data processing?
A. Two B. Three C. Four D. Five
Answer: B. Three
Explanation: Based on data processing, computers are classified into three main types: **Analog, Digital, and Hybrid Computers.**

Q2. Which type of computer processes continuous data?
A. Digital Computer B. Analog Computer C. Hybrid Computer D. Quantum Computer
Answer: B. Analog Computer
Explanation: Analog computers process continuous physical quantities such as temperature, pressure, and voltage.

Q3. Which type of computer processes discrete or binary data?
A. Analog Computer
B. Digital Computer
C. Hybrid Computer
D. Mechanical Computer

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Answer: B. Digital Computer

Explanation: Digital computers process data in binary form (0 and 1) and are the most commonly used computers today.

Q4. Which type of computer combines the features of analog and digital computers?

A. Supercomputer B. Mainframe Computer
C. Hybrid Computer D. Mini Computer

Answer: C. Hybrid Computer

Explanation: A hybrid computer combines the speed of analog computers with the accuracy of digital computers.

Q5. Which type of computer is commonly used in hospitals for patient monitoring?

A. Analog Computer B. Hybrid Computer
C. Supercomputer D. Personal Computer

Answer: B. Hybrid Computer

Explanation: Hybrid computers are widely used in hospitals because they can process both continuous signals and digital data.

Q6. Which of the following is an example of a digital computer?

A. Thermometer B. Desktop Computer
C. Speedometer D. Analog Clock

Answer: B. Desktop Computer

Explanation: Desktop computers process digital data and are examples of digital computers.

Q7. Which computer is the fastest and most powerful?

A. Mini Computer B. Supercomputer C. Workstation D. Microcomputer

Answer: B. Supercomputer

Explanation: Supercomputers perform trillions of calculations per second and are used for complex scientific research.

Q8. Supercomputers are mainly used for _____.

A. Word Processing B. Weather Forecasting and Scientific Research
C. Playing Games D. Watching Movies

Answer: B. Weather Forecasting and Scientific Research

Explanation: Supercomputers are used for weather prediction, space research, simulations, and scientific computations.

Q9. Which type of computer is designed to support hundreds or thousands of users simultaneously?

A. Laptop B. Tablet C. Mainframe Computer D. Smartphone

Answer: C. Mainframe Computer

Explanation: Mainframe computers are used by banks, airlines, and government organizations to handle large volumes of data.

Q10. Mainframe computers are commonly used in _____.

A. Banking Systems B. Mobile Gaming C. Home Entertainment D. Graphic Design Only

Answer: A. Banking Systems

Explanation: Mainframes process millions of transactions securely and efficiently in banking and other large organizations.

Q11. Which type of computer is smaller than a mainframe but more powerful than a microcomputer?

A. Mini Computer B. Laptop C. Tablet D. Smartphone

Answer: A. Mini Computer

Explanation: Mini computers support multiple users and are often used by medium-sized organizations.

Q12. A microcomputer is also known as a _____.

A. Personal Computer (PC) B. Mainframe
C. Supercomputer D. Quantum Computer

Answer: A. Personal Computer (PC)

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Explanation: A microcomputer is designed for individual use and is commonly called a Personal Computer.

Q13. Which of the following is an example of a microcomputer?

A. Desktop Computer B. Mainframe Computer
C. Supercomputer D. Server Cluster

Answer: A. Desktop Computer

Explanation: Desktop computers are personal computers intended for individual users.

Q14. Which device is a portable microcomputer?

A. Laptop B. Mainframe C. Supercomputer D. Mini Computer

Answer: A. Laptop

Explanation: A laptop is a portable personal computer with built-in display, keyboard, and battery.

Q15. Which of the following is NOT a microcomputer?

A. Desktop B. Laptop C. Smartphone D. Mainframe Computer

Answer: D. Mainframe Computer

Explanation: A mainframe computer is a large multi-user system, unlike microcomputers designed for personal use.

Q16. Which type of computer is specially designed for engineering and scientific applications?

A. Workstation B. Tablet C. Smartphone D. Notebook

Answer: A. Workstation

Explanation: Workstations provide higher performance than standard PCs and are used for engineering, graphics, and scientific computing.

Q17. Which computer is generally used by a single user?

A. Mainframe B. Supercomputer C. Personal Computer D. Mini Computer

Answer: C. Personal Computer

Explanation: Personal computers are designed for use by one person at a time.

Q18. Which type of computer occupies the largest physical space?

A. Laptop B. Desktop C. Mainframe D. Supercomputer

Answer: D. Supercomputer

Explanation: Supercomputers often consist of thousands of processors and occupy large rooms.

Q19. Which type of computer is used for climate modelling?

A. Desktop Computer B. Laptop C. Supercomputer D. Tablet

Answer: C. Supercomputer

Explanation: Climate modelling requires massive computational power, making supercomputers the preferred choice.

Q20. Which computer type is best suited for personal use at home?

A. Supercomputer B. Mainframe Computer
C. Personal Computer D. Hybrid Computer

Answer: C. Personal Computer

Explanation: Personal computers are affordable and designed for everyday tasks such as browsing, studying, and office work.

Q21. Which type of computer can process both analog and digital signals?

A. Analog Computer B. Digital Computer
C. Hybrid Computer D. Mainframe Computer

Answer: C. Hybrid Computer

Explanation: Hybrid computers combine the advantages of analog and digital systems.

Q22. Which computer type is primarily used in scientific laboratories?

A. Supercomputer B. Digital Watch C. Smartphone D. Calculator

Answer: A. Supercomputer

Explanation: Scientific laboratories use supercomputers for simulations, research, and complex calculations.

Q23. Which of the following is an example of an analog computer?

A. Mercury Thermometer B. Desktop Computer

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C. Laptop D. Tablet

Answer: A. Mercury Thermometer

Explanation: A mercury thermometer measures continuous temperature values and is an example of an analog device.

Q24. Which computer type is capable of handling millions of transactions daily?

A. Laptop B. Mainframe Computer C. Tablet D. Personal Computer

Answer: B. Mainframe Computer

Explanation: Mainframe computers are built to process large-scale business transactions with high reliability.

Q25. Which of the following is an example of a handheld computer?

A. Smartphone B. Mainframe C. Supercomputer D. Mini Computer

Answer: A. Smartphone

Explanation: Smartphones are handheld microcomputers capable of performing many computing tasks.

Q26. Which computer type is most suitable for graphics designing and 3D animation?

A. Works B. Calculator C. Tablet Only D. Mainframe

Answer: A. Workstation

Explanation: Workstations provide powerful processors and graphics capabilities for professional applications.

Q27. Which computer type offers the highest processing speed?

A. Laptop B. Workstation C. Supercomputer D. Desktop

Answer: C. Supercomputer

Explanation: Supercomputers are designed for extremely high-speed processing and complex computations.

Q28. Which of the following correctly matches the computer type with its use?

A. Mainframe – Personal Gaming B. Supercomputer – Weather Forecasting

C. Laptop – Space Research Only D. Analog Computer – Email Processing

Answer: B. Supercomputer – Weather Forecasting

Explanation: Supercomputers are extensively used for weather forecasting due to their massive processing power.

Q29. Which type of computer is commonly used in schools, homes, and offices?

A. Mainframe Computer B. Personal Computer

C. Supercomputer D. Hybrid Computer

Answer: B. Personal Computer

Explanation: Personal computers are affordable, easy to use, and suitable for daily computing needs.

Q30. Which of the following correctly represents the types of computers based on data processing?

A. Analog, Digital, Hybrid B. Mainframe, Laptop, Desktop

C. Supercomputer, Tablet, Smartphone D. Server, Notebook, Workstation

Answer: A. Analog, Digital, Hybrid

Explanation: Based on **data processing**, computers are classified into **Analog Computers**, **Digital Computers**, and **Hybrid Computers**. These categories differ in how they process and represent data.

Chapter 6: Classification of Computer

30 Multiple Choice Questions (MCQs)

Q1. Computers are commonly classified according to _____.

A. Color only B. Size, Purpose, and Data Processing C. Price only D. Brand only

Answer: B. Size, Purpose, and Data Processing

Explanation: Computers are commonly classified based on **size**, **purpose**, and **data processing method**.

Q2. Which of the following is a classification of computers based on size?

A. Analog Computer B. Digital Computer

C. Microcomputer D. General Purpose Computer

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Answer: C. Microcomputer
Explanation: Based on size, computers are classified as **Microcomputer, Minicomputer, Mainframe Computer, and Supercomputer**.

Q3. Which is the smallest type of computer based on size?
A. Mainframe Computer B. Supercomputer
C. Minicomputer D. Microcomputer
Answer: D. Microcomputer
Explanation: A microcomputer is the smallest and most commonly used type of computer designed for individual users.

Q4. Which type of computer is designed for a single user?
A. Supercomputer B. Mainframe Computer C. Microcomputer D. Minicomputer
Answer: C. Microcomputer
Explanation: Microcomputers, also known as personal computers, are designed for use by one person at a time.

Q5. Which type of computer is more powerful than a microcomputer but less powerful than a mainframe?
A. Supercomputer B. Minicomputer C. Laptop D. Tablet
Answer: B. Minicomputer
Explanation: A minicomputer supports multiple users and is used by medium-sized organizations.

Q6. Which type of computer can support hundreds or thousands of users simultaneously?
A. Laptop B. Tablet C. Mainframe Computer D. Smartphone
Answer: C. Mainframe Computer
Explanation: Mainframe computers are designed to process large amounts of data and support many users at the same time.

Q7. Which type of computer has the highest processing power?
A. Microcomputer B. Minicomputer
C. Mainframe Computer D. Supercomputer
Answer: D. Supercomputer
Explanation: Supercomputers are the fastest and most powerful computers, used for scientific research and complex calculations.

Q8. Which classification of computers is based on the purpose of use?
A. Analog and Digital B. General Purpose and Special Purpose
C. Micro and Mini D. Desktop and Laptop
Answer: B. General Purpose and Special Purpose
Explanation: Based on purpose, computers are classified as **General Purpose** and **Special Purpose** computers.

Q9. A computer designed to perform a variety of tasks is called a _____.
A. Special Purpose Computer B. Analog Computer
C. General Purpose Computer D. Hybrid Computer
Answer: C. General Purpose Computer
Explanation: General-purpose computers can perform many different tasks such as word processing, browsing, programming, and gaming.

Q10. A computer designed for a specific task is called a _____.
A. General Purpose Computer B. Hybrid Computer
C. Special Purpose Computer D. Digital Computer
Answer: C. Special Purpose Computer
Explanation: Special-purpose computers are built to perform one specific function efficiently.

Q11. Which of the following is an example of a General-Purpose Computer?
A. Desktop Computer B. Washing Machine Controller
C. ATM Controller D. Traffic Light Controller

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Answer: A. Desktop Computer
Explanation: A desktop computer can perform many different types of tasks and is therefore a general-purpose computer.

Q12. Which of the following is an example of a Special Purpose Computer?
A. Laptop B. Desktop Computer C. ATM Machine D. Tablet
Answer: C. ATM Machine
Explanation: An ATM is designed mainly for banking operations, making it a special-purpose computer.

Q13. Based on data processing, computers are classified into _____.
A. Desktop, Laptop, Tablet B. Analog, Digital, Hybrid
C. Micro, Mini, Mainframe D. Personal, Server, Workstation
Answer: B. Analog, Digital, Hybrid
Explanation: Data processing classification includes Analog, Digital, and Hybrid computers.

Q14. Which computer processes continuous data?
A. Digital Computer B. Hybrid Computer
C. Analog Computer D. Mainframe Computer
Answer: C. Analog Computer
Explanation: Analog computers work with continuously changing physical quantities such as temperature and pressure.

Q15. Which computer processes binary data?
A. Analog Computer B. Digital Computer
C. Hybrid Computer D. Mechanical Computer
Answer: B. Digital Computer
Explanation: Digital computers process information using binary digits (0 and 1).

Q16. Which computer combines the features of analog and digital computers?
A. Minicomputer B. Hybrid Computer
C. Mainframe Computer D. Microcomputer
Answer: B. Hybrid Computer
Explanation: Hybrid computers combine the speed of analog systems with the accuracy of digital systems.

Q17. Which computer is commonly used for weather forecasting?
A. Laptop B. Desktop Computer C. Supercomputer D. Tablet
Answer: C. Supercomputer
Explanation: Weather forecasting requires enormous computational power, making supercomputers the ideal choice.

Q18. Which computer is widely used in banks for processing millions of transactions?
A. Mainframe Computer B. Laptop C. Smartphone D. Tablet
Answer: A. Mainframe Computer
Explanation: Mainframe computers provide high reliability and support a large number of users simultaneously.

Q19. Which computer is most suitable for personal use?
A. Supercomputer B. Mainframe Computer C. Microcomputer D. Minicomputer
Answer: C. Microcomputer
Explanation: Microcomputers, such as desktop and laptop computers, are designed for individual users.

Q20. Which of the following is an example of a microcomputer?
A. Laptop B. Supercomputer C. Mainframe Computer D. Minicomputer
Answer: A. Laptop
Explanation: A laptop is a portable microcomputer intended for personal use.

Q21. Which classification is based on the physical size of a computer?
A. Size Classification B. Purpose Classification
C. Data Processing Classification D. Software Classification

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Answer: A. Size Classification

Explanation: Size classification divides computers into Micro, Mini, Mainframe, and Supercomputers.

Q22. Which of the following is NOT a size-based classification?

A. Supercomputer B. Mainframe Computer
C. Hybrid Computer D. Minicomputer

Answer: C. Hybrid Computer

Explanation: Hybrid Computer belongs to data processing classification, not size classification.

Q23. Which computer is generally used in engineering and scientific research?

A. Desktop Computer B. Supercomputer
C. Tablet D. Smartphone

Answer: B. Supercomputer

Explanation: Supercomputers are designed for advanced scientific simulations and engineering applications.

Q24. Which computer type supports multiple users in medium-sized organizations?

A. Microcomputer B. Minicomputer C. Supercomputer D. Laptop

Answer: B. Minicomputer

Explanation: Minicomputers allow multiple users to work simultaneously and are suitable for medium-sized businesses.

Q25. Which classification is based on the task performed by the computer?

A. Size Classification B. Purpose Classification
C. Data Processing Classification D. Memory Classification

Answer: B. Purpose Classification

Explanation: Purpose classification divides computers into General Purpose and Special Purpose computers.

Q26. Which of the following is a Special Purpose Computer?

A. ATM Machine B. Desktop Computer C. Laptop D. Tablet

Answer: A. ATM Machine

Explanation: An ATM is built specifically for banking operations and performs limited predefined tasks.

Q27. Which type of computer is used in hospitals to monitor patients?

A. Analog Computer B. Hybrid Computer
C. Mainframe Computer D. Microcomputer

Answer: B. Hybrid Computer

Explanation: Hybrid computers process both analog signals from medical equipment and digital data for analysis.

Q28. Which of the following correctly matches the classification with an example?

A. Supercomputer – Personal Use B. Mainframe – Banking System
C. Analog Computer – Word Processing D. Hybrid Computer – Email Server

Answer: B. Mainframe – Banking System

Explanation: Mainframe computers are widely used in banking because they can handle millions of secure transactions.

Q29. Which of the following is NOT a General Purpose Computer?

A. Desktop Computer B. Laptop C. ATM Machine D. Personal Computer

Answer: C. ATM Machine

Explanation: An ATM performs a limited set of banking functions and is therefore a Special Purpose Computer.

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Chapter 7: Hardware

30 Multiple Choice Questions (MCQs)

Q1. What is computer hardware?



A. A set of instructions for a computer B. The physical components of a computer
C. A programming language D. A computer network

Answer: B. The physical components of a computer

Explanation: Hardware refers to the physical parts of a computer that can be seen and touched, such as the CPU, keyboard, monitor, and printer.

Q2. Which of the following is an example of hardware?

A. Windows 11 B. MS Word C. Keyboard D. Antivirus

Answer: C. Keyboard

Explanation: A keyboard is a physical input device, making it a hardware component.

Q3. Which of the following is NOT hardware?

A. Mouse B. Monitor C. Printer D. Operating System

Answer: D. Operating System

Explanation: An operating system is software that manages computer hardware and software resources.

Q4. Which hardware component is known as the "brain" of the computer?

A. RAM B. CPU C. Hard Disk D. Monitor

Answer: B. CPU

Explanation: The CPU (Central Processing Unit) performs calculations, processes data, and controls all computer operations.

Q5. Which hardware device is used to display information?

A. Keyboard B. Mouse C. Monitor D. Scanner

Answer: C. Monitor

Explanation: A monitor is an output device that displays text, images, and videos.

Q6. Which hardware device is commonly used to enter text into a computer?

A. Printer B. Keyboard C. Speaker D. Monitor

Answer: B. Keyboard

Explanation: The keyboard is the primary input device used for typing data and commands.

Q7. Which hardware device is used to control the pointer on the screen?

A. Scanner B. Mouse C. Printer D. Plotter

Answer: B. Mouse

Explanation: A mouse is a pointing device used to move the cursor and interact with graphical user interfaces.

Q8. Which hardware component stores data permanently?

A. RAM B. Cache Memory C. Hard Disk Drive (HDD) D. CPU Register

Answer: C. Hard Disk Drive (HDD)

Explanation: A hard disk stores data permanently even when the computer is turned off.

Q9. Which hardware device produces printed output?

A. Scanner B. Monitor C. Printer D. Webcam

Answer: C. Printer

Explanation: A printer converts digital documents into printed copies on paper.

Q10. Which of the following is an input device?

A. Speaker B. Monitor C. Keyboard D. Printer

Answer: C. Keyboard

Explanation: A keyboard is used to input text, numbers, and commands into a computer.

Q11. Which hardware component connects all other components of a computer?

A. Motherboard B. Hard Disk C. Monitor D. Scanner

Answer: A. Motherboard

Explanation: The motherboard is the main circuit board that connects the CPU, memory, storage, and other hardware devices.

Q12. Which hardware component supplies power to the computer?

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A. RAM B. Power Supply Unit (PSU) C. CPU D. Motherboard
Answer: B. Power Supply Unit (PSU)
Explanation: The PSU converts AC power into DC power required by computer components.
Q13. Which hardware device captures images and videos?
A. Printer B. Webcam C. Speaker D. Monitor
Answer: B. Webcam
Explanation: A webcam is an input device used for video recording and video conferencing.
Q14. Which hardware device is used to scan documents?
A. Plotter B. Scanner C. Projector D. Speaker
Answer: B. Scanner
Explanation: A scanner converts printed documents and images into digital format.
Q15. Which hardware device is used to produce sound?
A. Keyboard B. Mouse C. Speaker D. Scanner
Answer: C. Speaker
Explanation: Speakers are output devices that produce audio from a computer.
Q16. Which hardware component performs arithmetic and logical operations?
A. Hard Disk B. ALU C. Monitor D. Keyboard
Answer: B. ALU
Explanation: The Arithmetic Logic Unit (ALU) performs mathematical calculations and logical comparisons.
Q17. Which hardware component controls all operations of the computer?
A. Control Unit (CU) B. Hard Disk C. RAM D. Printer
Answer: A. Control Unit (CU)
Explanation: The Control Unit directs and coordinates all activities within the computer system.
Q18. Which hardware device stores data using flash memory?
A. Hard Disk Drive B. Pen Drive C. DVD D. Floppy Disk
Answer: B. Pen Drive
Explanation: A pen drive is a portable storage device that uses flash memory.
Q19. Which hardware device is commonly used for video conferencing?
A. Webcam B. Printer C. Plotter D. Scanner
Answer: A. Webcam
Explanation: A webcam captures live video for online meetings and video calls.
Q20. Which hardware device is mainly used to print large engineering drawings?
A. Inkjet Printer B. Laser Printer C. Plotter D. Dot Matrix Printer
Answer: C. Plotter
Explanation: Plotters are designed to print large, high-precision drawings such as maps and engineering plans.
Q21. Which of the following is NOT an output device?
A. Monitor B. Speaker C. Printer D. Keyboard
Answer: D. Keyboard
Explanation: A keyboard is an input device used to enter data into a computer.
Q22. Which hardware device is used to read optical discs?
A. Hard Disk B. DVD Drive C. RAM D. CPU
Answer: B. DVD Drive
Explanation: A DVD drive reads and writes data on CDs and DVDs.
Q23. Which hardware component temporarily stores data while programs are running?
A. RAM B. Hard Disk C. SSD D. DVD
Answer: A. RAM
Explanation: RAM temporarily stores data and instructions that the CPU is currently using.
Q24. Which hardware device allows users to hear music and system sounds?

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A. Scanner B. Speaker C. Plotter D. Webcam
Answer: B. Speaker
Explanation: Speakers convert digital audio signals into sound waves.
Q25. Which hardware device projects the computer display onto a large screen?
A. Projector B. Scanner C. Plotter D. Mouse
Answer: A. Projector
Explanation: A projector is an output device used for presentations and classroom teaching.
Q26. Which hardware component is installed directly on the motherboard?
A. CPU B. Monitor C. Printer D. Speaker
Answer: A. CPU
Explanation: The CPU is mounted on the motherboard using a dedicated processor socket.
Q27. Which of the following is portable hardware storage?
A. SSD B. Pen Drive C. CPU D. Motherboard
Answer: B. Pen Drive
Explanation: A pen drive is a compact, portable storage device used to transfer and store data.
Q28. Which hardware device is mainly used for biometric authentication?
A. Fingerprint Scanner B. Printer
C. Plotter D. Speak
Answer: A. Fingerprint Scanner
Explanation: A fingerprint scanner captures and verifies fingerprints for secure authentication.
Q29. Which hardware component provides the communication pathway between the CPU, memory, and other devices?
A. System Bus B. Keyboard C. Printer D. Scanner
Answer: A. System Bus
Explanation: The system bus transfers data, addresses, and control signals between computer components.
Q30. Which of the following correctly represents computer hardware?
A. CPU, Motherboard, RAM, Monitor, Keyboard, Mouse, Printer
B. Windows, MS Word, Chrome, Antivirus
C. C Language, Java, Python, HTML
D. Internet, Email, Website, Browser
Answer: A. CPU, Motherboard, RAM, Monitor, Keyboard, Mouse, Printer
Explanation: Computer hardware includes all physical components that can be seen and touched, such as the CPU, motherboard, memory modules, monitor, keyboard, mouse, printer, storage devices, and other peripherals.

Chapter 8: Software

30 Multiple Choice Questions (MCQs)

Q1. What is software?
A. The physical components of a computer B. A collection of programs and instructions
C. A storage device D. An input device
Answer: B. A collection of programs and instructions
Explanation: Software is a collection of programs, procedures, and instructions that tell a computer how to perform specific tasks.
Q2. Which of the following is an example of software?
A. Keyboard B. Monitor C. Microsoft Word D. Mouse
Answer: C. Microsoft Word

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Explanation: Microsoft Word is application software used for creating and editing documents.

Q3. Software is classified into _____ major categories.

A. One B. Two C. Three D. Four

Answer: B. Two

Explanation: Software is mainly classified into **System Software** and **Application Software**.

Q4. Which type of software manages the computer hardware?

A. Application Software B. System Software

C. Utility Software D. Programming Software

Answer: B. System Software

Explanation: System software controls and manages computer hardware and provides a platform for application software.

Q5. Which of the following is system software?

A. MS Excel B. Adobe Photoshop C. Windows 11 D. VLC Media Player

Answer: C. Windows 11

Explanation: Windows 11 is an operating system, which is a type of system software.

Q6. Which software acts as an interface between the user and the hardware?

A. Antivirus B. Operating System C. MS Word D. Web Browser

Answer: B. Operating System

Explanation: The operating system acts as an interface between the user and the computer hardware.

Q7. Which of the following is NOT system software?

A. Windows B. Linux C. MS Word D. Android

Answer: C. MS Word

Explanation: MS Word is application software, while Windows, Linux, and Android are operating systems.

Q8. Which type of software is designed to perform specific user tasks?

A. System Software B. Application Software

C. Firmware D. Device Driver

Answer: B. Application Software

Explanation: Application software helps users perform specific tasks such as word processing, accounting, or browsing.

Q9. Which of the following is an example of application software?

A. Linux B. Windows C. Microsoft Excel D. BIOS

Answer: C. Microsoft Excel

Explanation: Microsoft Excel is application software used for spreadsheet creation and data analysis.

Q10. Which software is used to create documents?

A. MS Word B. BIOS C. Linux D. Device Driver

Answer: A. MS Word

Explanation: MS Word is a word processing application used to create and edit documents.

Q11. Which software is primarily used for spreadsheet calculations?

A. MS Excel B. MS Paint C. Notepad D. VLC Media Player

Answer: A. MS Excel

Explanation: MS Excel is designed for calculations, charts, data analysis, and spreadsheets.

Q12. Which software is used to create presentations?

A. MS Word B. MS PowerPoint C. MS Excel D. Paint

Answer: B. MS PowerPoint

Explanation: MS PowerPoint is presentation software used to create slideshows.

Q13. Which software is used to browse websites?

A. Web Browser B. Operating System C. BIOS D. Compiler

Answer: A. Web Browser

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Explanation: A web browser allows users to access and view websites on the Internet.

Q14. Which of the following is a web browser?

A. Google Chrome B. MS Excel C. Windows 11 D. Adobe Photoshop

Answer: A. Google Chrome

Explanation: Google Chrome is one of the most popular web browsers used for Internet browsing.

Q15. Which software protects a computer from malicious programs?

A. Antivirus Software B. MS Word C. Paint D. Calculator

Answer: A. Antivirus Software

Explanation: Antivirus software detects, prevents, and removes viruses and other malware.

Q16. Which software helps remove unnecessary files and optimize system performance?

A. Utility Software B. Presentation Software

C. Database Software D. Graphics Software

Answer: A. Utility Software

Explanation: Utility software performs maintenance tasks such as disk cleanup, backup, and optimization.

Q17. Which of the following is an example of utility software?

A. Disk Cleanup B. MS Word C. PowerPoint D. Photoshop

Answer: A. Disk Cleanup

Explanation: Disk Cleanup is a utility program that removes temporary and unnecessary files.

Q18. Which software translates high-level language into machine language?

A. Compiler B. MS Word C. Paint D. Chrome

Answer: A. Compiler

Explanation: A compiler converts the entire source code into machine code before execution.

Q19. Which software translates a program line by line?

A. Interpreter B. Browser C. Media Player D. Spreadsheet

Answer: A. Interpreter

Explanation: An interpreter translates and executes one line of code at a time.

Q20. Which software is permanently stored in ROM?

A. Firmware B. MS Word C. Excel D. Chrome

Answer: A. Firmware

Explanation: Firmware is software permanently stored in ROM that controls hardware devices.

Q21. BIOS is an example of _____.

A. Application Software B. Firmware C. Spreadsheet Software D. Graphics Software

Answer: B. Firmware

Explanation: BIOS (Basic Input/Output System) is firmware that initializes hardware during the boot process.

Q22. Which software controls a specific hardware device?

A. Device Driver B. Spreadsheet Software

C. Antivirus Software D. Web Browser

Answer: A. Device Driver

Explanation: A device driver enables the operating system to communicate with hardware devices.

Q23. Which of the following is an operating system?

A. Ubuntu B. MS Word C. Photoshop D. Chrome

Answer: A. Ubuntu

Explanation: Ubuntu is a Linux-based operating system.

Q24. Which of the following is NOT application software?

A. MS Excel B. Photoshop C. Windows 11 D. VLC Media Player

Answer: C. Windows 11

Explanation: Windows 11 is system software, while the others are application software.

Q25. Which software is essential for starting a computer?

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A. Operating System B. MS Word C. Calculator D. Paint

Answer: A. Operating System

Explanation: The operating system is required to manage hardware and run applications after the computer starts.

Q26. Which software is mainly used for image editing?

A. Adobe Photoshop B. MS Word C. Chrome D. VLC Media Player

Answer: A. Adobe Photoshop

Explanation: Adobe Photoshop is a graphics editing application used to edit images and photographs.

Q27. Which software category does VLC Media Player belong to?

A. System Software B. Application Software C. Firmware D. Device Driver

Answer: B. Application Software

Explanation: VLC Media Player is application software used for playing audio and video files.

Q28. Which of the following is an example of open-source operating system?

A. Windows 11 B. Ubuntu Linux C. macOS D. MS DOS

Answer: B. Ubuntu Linux

Explanation: Ubuntu Linux is a popular open-source operating system based on the Linux kernel.

Q29. Which software allows users to create, edit, and save documents?

A. Microsoft Word B. BIOS C. Device Driver D. Compiler

Answer: A. Microsoft Word

Explanation: Microsoft Word is word processing software used to create and edit text documents.

Q30. Which of the following correctly classifies software?

A. **System Software:** Operating System, Device Driver, Utility Software, Firmware
Application Software: MS Word, MS Excel, Photoshop, Chrome

B. **System Software:** Keyboard, Mouse, Monitor
Application Software: CPU, RAM

C. **System Software:** Printer, Scanner
Application Software: Motherboard, Hard Disk

D. **System Software:** Internet, Email
Application Software: Hardware

Answer: A

Explanation: Software is mainly divided into two categories:

- **System Software:** Operating System, Device Drivers, Utility Software, Firmware
- **Application Software:** Word Processors, Spreadsheets, Presentation Software, Web Browsers, Graphics Software, Media Players, and Database Applications.

Chapter 9: Input Devices

30 Multiple Choice Questions (MCQs)

Q1. What is an input device?

A. A device used to display output
B. A device used to enter data and instructions into a computer
C. A device used to store data permanently
D. A device used to print documents

Answer: B. A device used to enter data and instructions into a computer

Explanation: An input device allows users to provide data, commands, and instructions to a computer for processing.

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Q2. Which of the following is the most commonly used input device?

A. Monitor B. Keyboard C. Printer D. Speaker

Answer: B. Keyboard

Explanation: The keyboard is the primary input device used to enter text, numbers, and commands.

Q3. Which input device is used to control the pointer on the screen?

A. Monitor B. Mouse C. Printer D. Plotter

Answer: B. Mouse

Explanation: A mouse is a pointing device used to move the cursor and select items on the screen.

Q4. Which input device is used to scan printed documents?

A. Plotter B. Scanner C. Printer D. Speaker

Answer: B. Scanner

Explanation: A scanner converts printed documents and images into digital format.

Q5. Which input device captures photographs and videos?

A. Webcam B. Speaker C. Monitor D. Printer

Answer: A. Webcam

Explanation: A webcam captures live images and videos for video conferencing and recording.

Q6. Which input device is primarily used to record voice?

A. Microphone B. Speaker C. Plotter D. Printer

Answer: A. Microphone

Explanation: A microphone converts sound waves into digital signals for recording and communication.

Q7. Which input device reads printed barcodes?

A. Barcode Reader B. Scanner C. Printer D. Plotter

Answer: A. Barcode Reader

Explanation: A barcode reader scans barcodes and sends the information to the computer.

Q8. Which input device is commonly used for biometric authentication?

A. Fingerprint Scanner B. Printer C. Monitor D. Speaker

Answer: A. Fingerprint Scanner

Explanation: A fingerprint scanner captures fingerprint patterns for identity verification.

Q9. Which input device is used to read QR codes?

A. Barcode Scanner B. QR Code Scanner C. Plotter D. Speaker

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Answer: B. QR Code Scanner

Explanation: A QR code scanner reads two-dimensional QR codes and converts them into digital information.

Q10. Which input device is commonly used in supermarkets for billing?

A. Barcode Reader B. Printer C. Monitor D. Speaker

Answer: A. Barcode Reader

Explanation: Barcode readers quickly scan product codes during billing.

Q11. Which input device is mainly used for drawing and designing?

A. Joystick B. Light Pen C. Graphics Tablet (Digitizer) D. Speaker

Answer: C. Graphics Tablet (Digitizer)

Explanation: A graphics tablet allows users to create digital drawings and designs with a stylus.

Q12. Which input device is mainly used for playing video games?

A. Joystick B. Monitor C. Printer D. Plotter

Answer: A. Joystick

Explanation: A joystick is used to control movement in games and simulation software.

Q13. Which input device detects touch on a display screen?

A. Touch Screen B. Monitor C. Printer D. Speaker

Answer: A. Touch Screen

Explanation: A touch screen acts as both an input and output device by displaying information and accepting touch input.

Q14. Which input device uses a stylus for selecting objects on the screen?

A. Light Pen B. Mouse C. Keyboard D. Scanner

Answer: A. Light Pen

Explanation: A light pen is used to point, draw, and select items directly on compatible display screens.

Q15. Which input device is used to enter handwritten signatures electronically?

A. Signature Pad B. Plotter C. Printer D. Speaker

Answer: A. Signature Pad

Explanation: A signature pad captures handwritten signatures in digital form.

Q16. Which input device converts printed text into editable digital text?

A. OCR (Optical Character Recognition) Reader B. OMR Reader
C. MICR Reader D. Barcode Reader

Answer: A. OCR (Optical Character Recognition) Reader

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Explanation: OCR technology recognizes printed characters and converts them into editable text.

Q17. Which input device reads marked answers on examination sheets?

A. OCR Reader B. OMR Reader C. MICR Reader D. Barcode Reader

Answer: B. OMR Reader

Explanation: OMR (Optical Mark Recognition) reads shaded marks on answer sheets and surveys.

Q18. Which input device is used by banks to read cheque numbers?

A. OMR Reader B. OCR Reader C. MICR Reader D. Barcode Reader

Answer: C. MICR Reader

Explanation: MICR (Magnetic Ink Character Recognition) reads magnetic characters printed on bank cheques.

Q19. Which input device is used to capture fingerprints?

A. Webcam B. Fingerprint Scanner C. Plotter D. Projector

Answer: B. Fingerprint Scanner

Explanation: Fingerprint scanners are widely used for attendance systems and biometric security.

Q20. Which input device is used for online video meetings?

A. Webcam B. Speaker C. Printer D. Plotter

Answer: A. Webcam

Explanation: A webcam captures live video for online meetings and video conferencing.

Q21. Which of the following is NOT an input device?

A. Keyboard B. Mouse C. Monitor D. Scanner

Answer: C. Monitor

Explanation: A monitor is an output device because it displays information.

Q22. Which input device is commonly used in ATM machines to read bank cards?

A. Card Reader B. Plotter C. Printer D. Speaker

Answer: A. Card Reader

Explanation: A card reader reads data stored on magnetic stripe or chip-based cards.

Q23. Which input device captures images from printed photographs?

A. Scanner B. Monitor C. Speaker D. Plotte

Answer: A. Scanner

Explanation: A scanner digitizes printed photos and documents for storage in a computer.

Q24. Which input device is used to enter numbers quickly in accounting applications?

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A. Numeric Keypad B. Speaker C. Monitor D. Plotter

Answer: A. Numeric Keypad

Explanation: The numeric keypad allows fast entry of numbers and mathematical operations.

Q25. Which input device is used to provide audio commands to a computer?

A. Microphone B. Speaker C. Plotter D. Printer

Answer: A. Microphone

Explanation: Voice commands are captured through a microphone and processed by speech recognition software.

Q26. Which input device is commonly used for CAD (Computer-Aided Design)?

A. Graphics Tablet B. Printer C. Speaker D. Projector

Answer: A. Graphics Tablet

Explanation: Graphics tablets allow precise drawing and are widely used in CAD and graphic design.

Q27. Which of the following devices is both an input and an output device?

A. Touch Screen B. Keyboard C. Scanner D. Microphone

Answer: A. Touch Screen

Explanation: A touch screen displays information (output) and accepts touch commands (input).

Q28. Which input device is designed specifically to recognize handwritten text?

A. OCR Software with Digital Pen B. Speaker

C. Monitor D. Plotter

Answer: A. OCR Software with Digital Pen

Explanation: OCR combined with digital handwriting input can recognize and convert handwritten text into digital text.

Q29. Which of the following is an example of a pointing device?

A. Mouse B. Printer C. Speaker D. Monitor

Answer: A. Mouse

Explanation: A mouse is a pointing device used to interact with graphical user interfaces by moving the cursor.

Q30. Which of the following contains only input devices?

A. Keyboard, Mouse, Scanner, Microphone

B. Monitor, Printer, Speaker, Projector

C. CPU, RAM, Hard Disk, Motherboard

D. Windows, MS Word, Chrome, Paint

Answer: A. Keyboard, Mouse, Scanner, Microphone

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Explanation: Input devices are used to enter data and instructions into a computer. Examples include the **Keyboard, Mouse, Scanner, Microphone, Webcam, Joystick, OCR, OMR, MICR, Barcode Reader, Fingerprint Scanner, Graphics Tablet, Light Pen, and Touch Screen**.

Chapter 10: Output Devices

30 Multiple Choice Questions (MCQs)

Q1. What is an output device?

A. A device used to enter data into a computer
B. A device that displays or produces processed information
C. A device used to store data permanently
D. A device used to process data

Answer: B. A device that displays or produces processed information

Explanation: An output device receives processed data from the computer and presents it to the user in a readable or usable form.

Q2. Which of the following is an output device?

A. Keyboard B. Mouse C. Monitor D. Scanner

Answer: C. Monitor

Explanation: A monitor displays processed information such as text, images, and videos.

Q3. Which output device is also known as a Visual Display Unit (VDU)?

A. Printer B. Monitor C. Speaker D. Plotter

Answer: B. Monitor

Explanation: A monitor is commonly referred to as a Visual Display Unit (VDU) because it visually displays computer output.

Q4. Which of the following is a soft copy output device?

A. Printer B. Plotter C. Monitor D. Fax Machine

Answer: C. Monitor

Explanation: A monitor displays information electronically, which is known as a soft copy.

Q5. Which output device produces a hard copy?

A. Speaker B. Printer C. Monitor D. Projector

Answer: B. Printer

Explanation: A printer produces information on paper, which is called a hard copy.

Q6. Which printer produces output by spraying tiny droplets of ink onto paper?

A. Laser Printer B. Dot Matrix Printer C. Inkjet Printer D. Thermal Printer

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Answer: C. Inkjet Printer

Explanation: Inkjet printers create images and text by spraying microscopic ink droplets onto paper.

Q7. Which printer uses laser beam technology?

A. Inkjet Printer B. Laser Printer C. Dot Matrix Printer D. Thermal Printer

Answer: B. Laser Printer

Explanation: Laser printers use laser technology and toner powder to produce high-quality printed documents.

Q8. Which printer is an impact printer?

A. Laser Printer B. Inkjet Printer C. Dot Matrix Printer D. Thermal Printer

Answer: C. Dot Matrix Printer

Explanation: A dot matrix printer uses pins to strike an ink ribbon against paper, making it an impact printer.

Q9. Which printer is commonly used for printing bills and receipts?

A. Inkjet Printer B. Thermal Printer C. Laser Printer D. Plotter

Answer: B. Thermal Printer

Explanation: Thermal printers are widely used in shops, ATMs, and restaurants for printing receipts.

Q10. Which output device produces audio?

A. Keyboard B. Speaker C. Mouse D. Scanner

Answer: B. Speaker

Explanation: Speakers convert digital audio signals into sound.

Q11. Which output device is commonly used during presentations?

A. Scanner B. Projector C. Keyboard D. Webcam

Answer: B. Projector

Explanation: A projector displays the computer screen onto a large surface for presentations and classrooms.

Q12. Which output device is mainly used for printing engineering drawings?

A. Inkjet Printer B. Laser Printer C. Plotter D. Thermal Printer

Answer: C. Plotter

Explanation: Plotters are used to print large, high-precision drawings such as maps and architectural designs.

Q13. Which of the following is NOT an output device?

A. Monitor B. Printer C. Scanner D. Speaker

Answer: C. Scanner

Explanation: A scanner is an input device because it captures data and sends it to the computer.

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Q14. Which output device displays text, images, and videos?

A. Plotter B. Monitor C. Printer D. Speaker

Answer: B. Monitor

Explanation: A monitor is the primary visual output device of a computer.

Q15. Which monitor technology provides thinner displays and lower power consumption?

A. CRT B. LCD C. Dot Matrix D. Drum Printer

Answer: B. LCD

Explanation: LCD (Liquid Crystal Display) monitors are thinner, lighter, and consume less power than CRT monitors.

Q16. What does CRT stand for?

A. Computer Ray Tube B. Cathode Ray Tube

C. Central Ray Terminal D. Cathode Read Technology

Answer: B. Cathode Ray Tube

Explanation: CRT (Cathode Ray Tube) was the technology used in older computer monitors and televisions.

Q17. Which display technology offers better picture quality and energy efficiency than LCD?

A. CRT B. LED C. Dot Matrix D. Thermal

Answer: B. LED

Explanation: LED monitors provide brighter images, better contrast, and lower power consumption than LCD monitors.

Q18. Which output device is used to listen to music from a computer?

A. Scanner B. Speaker C. Webcam D. Plotter

Answer: B. Speaker

Explanation: Speakers convert electrical signals into audible sound.

Q19. Which printer generally provides the fastest printing speed?

A. Dot Matrix Printer B. Inkjet Printer C. Laser Printer D. Thermal Printer

Answer: C. Laser Printer

Explanation: Laser printers are known for their high-speed printing and excellent print quality.

Q20. Which printer is best suited for high-volume office printing?

A. Inkjet Printer B. Laser Printer C. Dot Matrix Printer D. Thermal Printer

Answer: B. Laser Printer

Explanation: Laser printers are efficient, fast, and economical for large-volume printing.

Q21. Which output device produces graphical output on paper?

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A. Plotter B. Speaker C. Scanner D. Keyboard

Answer: A. Plotter

Explanation: Plotters are specialized output devices used to print graphics, maps, and engineering designs.

Q22. Which of the following is an example of a soft copy output?

A. Printed Report B. Paper Invoice C. Display on Monitor D. Book

Answer: C. Display on Monitor

Explanation: Information displayed on a monitor is called soft copy because it is viewed electronically.

Q23. Which printer uses toner instead of liquid ink?

A. Inkjet Printer B. Laser Printer C. Dot Matrix Printer D. Thermal Printer

Answer: B. Laser Printer

Explanation: Laser printers use toner powder fused onto paper using heat.

Q24. Which output device is commonly used in movie theaters and conference halls?

A. Projector B. Mouse C. Scanner D. Keyboard

Answer: A. Projector

Explanation: Projectors display images on large screens, making them suitable for audiences.

Q25. Which printer is capable of printing multi-part forms using carbon copies?

A. Laser Printer B. Inkjet Printer C. Dot Matrix Printer D. Thermal Printer

Answer: C. Dot Matrix Printer

Explanation: Dot matrix printers are impact printers capable of printing through multiple layers of paper.

Q26. Which output device is mainly used for hearing voice during video calls?

A. Speaker B. Scanner C. Plotter D. Keyboard

Answer: A. Speaker

Explanation: Speakers allow users to hear voices and sounds during online meetings and multimedia playback.

Q27. Which output device provides a permanent printed record?

A. Monitor B. Printer C. Speaker D. Projector

Answer: B. Printer

Explanation: A printer produces a hard copy, which can be stored as a permanent record.

Q28. Which of the following is NOT a printer?

A. Inkjet Printer B. Laser Printer C. Thermal Printer D. Scanner

Answer: D. Scanner

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Explanation: A scanner is an input device used to digitize documents and images.

Q29. Which output device is best for displaying multimedia content to a large audience?

A. Monitor B. Projector C. Speaker D. Plotter

Answer: B. Projector

Explanation: Projectors enlarge the computer display, making them ideal for classrooms, seminars, and conferences.

Q30. Which of the following correctly represents output devices?

A. Monitor, Printer, Speaker, Projector, Plotter B. Keyboard, Mouse, Scanner, Joystick

C. CPU, RAM, ROM, Hard Disk D. Windows, MS Word, Chrome, Excel

Answer: A Monitor, Printer, Speaker, Projector, Plotter

Explanation: Output devices present processed information to the user. Common output devices include the **Monitor, Printer, Speaker, Projector, and Plotter**, each serving a different purpose such as visual display, audio output, or printed output.

Chapter 11: Central Processing Unit (CPU)

30 Multiple Choice Questions (MCQs)

Q1. What does CPU stand for?

A. Central Program Unit B. Central Processing Unit
C. Computer Processing Unit D. Central Power Unit

Answer: B. Central Processing Unit

Explanation: The CPU (Central Processing Unit) is the main processing component of a computer that executes instructions and controls all operations.

Q2. Which component is known as the "Brain of the Computer"?

A. RAM B. Hard Disk C. CPU D. Motherboard

Answer: C. CPU

Explanation: The CPU is called the brain of the computer because it processes data, executes instructions, and controls all computer activities.

Q3. The CPU is mainly responsible for _____.

A. Displaying images B. Processing data and executing instructions
C. Printing documents D. Storing files permanently

Answer: B. Processing data and executing instructions

Explanation: The CPU processes data, performs calculations, and executes program instructions.

Q4. The CPU is located on the _____.

A. Hard Disk B. Motherboard C. Monitor D. Keyboard

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Answer: B. Motherboard

Explanation: The CPU is installed in a dedicated processor socket on the motherboard.

Q5. Which unit of the CPU performs arithmetic operations?

A. Control Unit (CU)
B. Arithmetic Logic Unit (ALU)
C. Memory Unit (MU)
D. Cache Unit

Answer: B. Arithmetic Logic Unit (ALU)

Explanation: The ALU performs arithmetic operations such as addition, subtraction, multiplication, and division.

Q6. Which unit of the CPU performs logical operations?

A. ALU B. RAM C. ROM D. Cache

Answer: A. ALU

Explanation: The ALU performs logical operations such as AND, OR, NOT, and comparison operations.

Q7. Which part of the CPU controls all computer operations?

A. ALU B. Control Unit (CU) C. Cache Memory D. Register

Answer: B. Control Unit (CU)

Explanation: The Control Unit directs and coordinates the activities of all computer components.

Q8. Which component fetches, decodes, and executes instructions?

A. CPU B. Monitor C. Hard Disk D. Keyboard

Answer: A. CPU

Explanation: The CPU performs the instruction cycle by fetching, decoding, and executing instructions.

Q9. Which unit of the CPU coordinates communication between hardware components?

A. ALU B. Control Unit C. Register D. Cache Memory

Answer: B. Control Unit

Explanation: The Control Unit manages communication between the CPU, memory, and input/output devices.

Q10. Which of the following is NOT a part of the CPU?

A. ALU B. Control Unit C. Registers D. Monitor

Answer: D. Monitor

Explanation: The monitor is an output device, not a component of the CPU.

Q11. Which CPU component stores temporary data during processing?

A. Register B. Hard Disk C. DVD D. Pen Drive

Answer: A. Register

Explanation: Registers are very small and extremely fast memory locations inside the CPU used for temporary storage.

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Q12. Which memory is the fastest in a computer system?

A. Hard Disk B. RAM C. Cache Memory D. DVD

Answer: C. Cache Memory

Explanation: Cache memory is the fastest memory and stores frequently used data to speed up CPU performance.

Q13. Which CPU component performs mathematical calculations?

A. CU B. ALU C. RAM D. ROM

Answer: B. ALU

Explanation: The ALU performs all arithmetic calculations and logical comparisons.

Q14. Which CPU component directs the sequence of operations?

A. Control Unit B. Hard Disk C. Printer D. SSD

Answer: A. Control Unit

Explanation: The Control Unit controls the execution sequence of instructions.

Q15. Which cycle is repeatedly performed by the CPU?

A. Save Cycle
B. Fetch–Decode–Execute Cycle
C. Print Cycle
D. Scan Cycle

Answer: B. Fetch–Decode–Execute Cycle

Explanation: The CPU continuously fetches instructions, decodes them, and executes them.

Q16. CPU speed is commonly measured in _____.

A. Bytes B. Hertz (Hz) C. Pixels D. Inches

Answer: B. Hertz (Hz)

Explanation: CPU speed is measured in Hertz (Hz), usually expressed as GHz (Gigahertz).

Q17. A CPU operating at 3.5 GHz performs approximately _____.

A. 3.5 million cycles per second
B. 3.5 billion cycles per second
C. 350 million cycles per second
D. 35 billion cycles per second

Answer: B. 3.5 billion cycles per second

Explanation: One Gigahertz (GHz) equals one billion clock cycles per second.

Q18. Which company manufactures the Core i7 processor?

A. AMD B. Intel C. Apple D. IBM

Answer: B. Intel

Explanation: Intel developed the Core i3, i5, i7, and i9 processor series.

Q19. Ryzen processors are manufactured by _____.

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A. Intel B. AMD C. IBM D. NVIDIA

Answer: B. AMD

Explanation: AMD manufactures the Ryzen series of processors for desktops and laptops.

Q20. Which of the following affects CPU performance?

A. Clock Speed B. Number of Cores C. Cache Memory D. All of the above

Answer: D. All of the above

Explanation: CPU performance depends on clock speed, cores, cache memory, and architecture.

Q21. What is a Dual-Core processor?

A. Processor with one core B. Processor with two cores
C. Processor with four cores D. Processor with eight cores

Answer: B. Processor with two cores

Explanation: A dual-core processor contains two independent processing units on a single chip.

Q22. A Quad-Core processor contains _____ cores.

A. Two B. Three C. Four D. Eight

Answer: C. Four

Explanation: A quad-core processor has four processing cores, improving multitasking and performance.

Q23. Which processor generally offers better multitasking performance?

A. Single-Core B. Dual-Core C. Quad-Core D. Multi-Core

Answer: D. Multi-Core

Explanation: Multi-core processors can execute multiple tasks simultaneously, improving performance.

Q24. Which CPU component temporarily stores frequently used instructions?

A. Cache Memory B. Hard Disk C. DVD D. SSD

Answer: A. Cache Memory

Explanation: Cache memory reduces data access time by storing frequently used instructions close to the CPU.

Q25. Which operation is NOT performed by the CPU?

A. Data Processing B. Arithmetic Operations
C. Printing Documents Directly on Paper D. Logical Operations

Answer: C. Printing Documents Directly on Paper

Explanation: Printing is performed by the printer, while the CPU only processes the print instructions.

Q26. Which component sends control signals to other parts of the computer?

A. ALU B. Control Unit C. Register D. RAM

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Answer: B. Control Unit

Explanation: The Control Unit manages and coordinates all operations inside the computer.

Q27. Which of the following is an internal CPU memory?

A. Register B. Hard Disk C. Pen Drive D. DVD

Answer: A. Register

Explanation: Registers are tiny memory locations located inside the CPU for high-speed processing.

Q28. Which processor feature allows multiple tasks to run simultaneously?

A. Multi-Core Technology B. Large Monitor
C. Printer Speed D. Hard Disk Capacity

Answer: A. Multi-Core Technology

Explanation: Multi-core processors improve multitasking by executing multiple instructions simultaneously.

Q29. Which of the following is TRUE about the CPU?

A. It is an output device.
B. It is an input device.
C. It processes data and controls computer operations.
D. It stores data permanently.
Answer: C. It processes data and controls computer operations.

Explanation: The CPU is the central processing unit responsible for executing instructions and controlling the entire computer system.

Q30. Which of the following correctly represents the main components of a CPU?

A. Arithmetic Logic Unit (ALU), Control Unit (CU), Registers

B. Keyboard, Mouse, Monitor

C. RAM, ROM, Hard Disk

D. Printer, Scanner, Speaker

Answer: A Arithmetic Logic Unit (ALU), Control Unit (CU), Registers

Explanation: The CPU consists of three main components:

- **Arithmetic Logic Unit (ALU):** Performs arithmetic and logical operations.
- **Control Unit (CU):** Controls and coordinates all computer operations.
- **Registers:** High-speed memory locations used for temporary data storage during processing.

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Chapter 12: Memory (RAM, ROM, Cache Memory)

30 Multiple Choice Questions (MCQs)



Q1. What is computer memory?

A. A device used to print documents
B. A storage area used to store data and instructions
C. A device used to display information
D. A communication device

Answer: B. A storage area used to store data and instructions

Explanation: Computer memory stores data, instructions, and information so that the CPU can access and process them efficiently.

Q2. Memory is primarily used to _____.

A. Scan documents
B. Store data and instructions
C. Print reports
D. Connect to the Internet

Answer: B. Store data and instructions

Explanation: Memory stores programs, data, and instructions required for processing.

Q3. Which type of memory is temporary?

A. ROM B. Hard Disk C. RAM D. DVD

Answer: C. RAM

Explanation: RAM is volatile memory, meaning its contents are lost when the power is turned off.

Q4. What does RAM stand for?

A. Random Access Memory
B. Read Access Memory
C. Rapid Access Memory
D. Random Allocation Memory

Answer: A. Random Access Memory

Explanation: RAM stands for Random Access Memory because any memory location can be accessed directly.

Q5. Which memory loses its data when the computer is turned off?

A. ROM B. Cache Memory C. RAM D. Hard Disk

Answer: C. RAM

Explanation: RAM is volatile memory and requires continuous power to retain data.

Q6. RAM is also known as _____.

A. Non-Volatile Memory
B. Primary Memory
C. Secondary Memory
D. Optical Memory

Answer: B. Primary Memory

Explanation: RAM is a part of primary memory because it is directly accessed by the CPU.

Q7. Which type of memory stores the operating system while programs are running?

A. ROM B. RAM C. DVD D. Hard Disk

Answer: B. RAM

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Explanation: When a program or operating system is running, it is loaded into RAM for fast access.

Q8. Which of the following is a characteristic of RAM?

A. Permanent Storage
B. Volatile Memory
C. Read-Only Memory
D. Optical Storage

Answer: B. Volatile Memory

Explanation: RAM loses all stored information when the computer is powered off.

Q9. What does ROM stand for?

A. Read Only Memory
B. Random Only Memory
C. Rapid Output Memory
D. Read Output Memory

Answer: A. Read Only Memory

Explanation: ROM stands for Read Only Memory and stores permanent instructions required during startup.

Q10. Which type of memory retains data even when power is turned off?

A. RAM B. ROM C. Cache Memory D. Register

Answer: B. ROM

Explanation: ROM is non-volatile memory, meaning it permanently stores data without requiring power.

Q11. ROM mainly stores _____.

A. User Documents
B. BIOS/Firmware Instructions
C. Movies
D. Temporary Files

Answer: B. BIOS/Firmware Instructions

Explanation: ROM stores firmware such as BIOS, which is needed to start the computer.

Q12. Which memory is used during the booting process?

A. RAM B. ROM C. Hard Disk D. Pen Drive

Answer: B. ROM

Explanation: ROM contains the BIOS program that initializes hardware during system startup.

Q13. Which memory is faster than RAM?

A. Hard Disk B. DVD C. Cache Memory D. Pen Drive

Answer: C. Cache Memory

Explanation: Cache memory is much faster than RAM and stores frequently used instructions for quick CPU access.

Q14. Cache Memory is located _____.

A. Inside or very close to the CPU
B. Inside the Monitor
C. Inside the Printer
D. Inside the Keyboard

Answer: A. Inside or very close to the CPU

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Explanation: Cache memory is placed near or inside the CPU to minimize data access time.

Q15. Which memory improves CPU performance?

A. ROM B. Cache Memory C. DVD D. Floppy Disk

Answer: B. Cache Memory

Explanation: Cache memory stores frequently used data and instructions, reducing CPU waiting time.

Q16. Which memory has the highest speed?

A. Hard Disk B. RAM C. Cache Memory D. DVD

Answer: C. Cache Memory

Explanation: Cache memory is the fastest memory available after CPU registers.

Q17. Which memory stores frequently used data?

A. RAM B. ROM C. Cache Memory D. SSD

Answer: C. Cache Memory

Explanation: Cache memory temporarily stores frequently accessed data to speed up processing.

Q18. Which of the following is non-volatile memory?

A. RAM B. Cache Memory C. ROM D. Register

Answer: C. ROM

Explanation: ROM permanently stores data even after the power is switched off.

Q19. Which memory is directly accessed by the CPU for running programs?

A. RAM B. DVD C. Hard Disk D. Blu-ray Disc

Answer: A. RAM

Explanation: The CPU directly accesses RAM while executing programs and processing data.

Q20. Which of the following memory types is volatile?

A. ROM B. RAM C. SSD D. Hard Disk

Answer: B. RAM

Explanation: RAM requires electrical power to retain stored information.

Q21. Which memory stores the BIOS program?

A. Cache Memory B. RAM C. ROM D. Hard Disk

Answer: C. ROM

Explanation: BIOS is permanently stored in ROM because it is essential for starting the computer.

Q22. Which memory allows both reading and writing of data?

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A. ROM B. RAM C. DVD-ROM D. CD-ROM

Answer: B. RAM

Explanation: Data in RAM can be read, modified, and deleted during program execution.

Q23. Which memory cannot normally be modified by the user?

A. RAM B. ROM C. Cache Memory D. Register

Answer: B. ROM

Explanation: ROM contains permanent instructions that are not normally changed during regular computer operation.

Q24. Which memory is mainly responsible for reducing CPU access time?

A. Hard Disk B. Cache Memory C. DVD D. ROM

Answer: B. Cache Memory

Explanation: Cache memory stores frequently accessed data, allowing the CPU to retrieve it much faster than from RAM.

Q25. Which memory is used for temporary storage while working on documents?

A. ROM B. RAM C. Hard Disk D. CD-ROM

Answer: B. RAM

Explanation: While editing a document, the data is temporarily stored in RAM until it is saved.

Q26. Which memory type is generally the largest in capacity?

A. Cache Memory B. RAM C. ROM D. Hard Disk

Answer: B. RAM

Explanation: Among the primary memory types (RAM, ROM, and Cache), RAM generally has the largest storage capacity.

Q27. Which sequence correctly represents memory from fastest to slowest?

A. RAM → Cache → ROM B. Cache → RAM → ROM

C. ROM → RAM → Cache D. Hard Disk → RAM → Cache

Answer: B. Cache → RAM → ROM

Explanation: Cache memory is the fastest, followed by RAM, while ROM is generally slower because it stores permanent firmware.

Q28. Which of the following is an example of volatile memory?

A. EEPROM B. ROM C. RAM D. Flash Memory

Answer: C. RAM

Explanation: RAM loses its contents when power is removed, making it volatile memory.

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Q29. Which statement about Cache Memory is TRUE?

A. It is slower than RAM.
B. It stores the operating system permanently.
C. It is used to speed up CPU operations.
D. It is an output device.

Answer: C. It is used to speed up CPU operations.

Explanation: Cache memory provides very fast access to frequently used data, significantly improving CPU performance.

Chapter 13: Storage Devices

30 Multiple Choice Questions (MCQs)

Q1. What is a storage device?

A. A device used to display information
B. A device used to store data and programs
C. A device used to process data
D. A device used to print documents

Answer: B. A device used to store data and programs

Explanation: A storage device is hardware used to store digital data, programs, and files either temporarily or permanently.

Q2. Which of the following is a secondary storage device?

A. RAM B. Cache Memory C. Hard Disk Drive (HDD) D. CPU Register

Answer: C. Hard Disk Drive (HDD)

Explanation: A Hard Disk Drive (HDD) is a secondary storage device used for permanent data storage.

Q3. Which storage device stores data permanently?

A. RAM B. Cache Memory C. Hard Disk Drive (HDD) D. Register

Answer: C. Hard Disk Drive (HDD)

Explanation: A hard disk retains data even after the computer is turned off.

Q4. Which storage device uses flash memory?

A. Hard Disk Drive B. Pen Drive C. Floppy Disk D. Magnetic Tape

Answer: B. Pen Drive

Explanation: A pen drive (USB flash drive) stores data using flash memory technology.

Q5. Which storage device has no moving parts?

A. Hard Disk Drive (HDD)
B. Solid State Drive (SSD)
C. Floppy Disk
D. Magnetic Tape

Answer: B. Solid State Drive (SSD)

Explanation: SSDs use flash memory chips and contain no moving mechanical parts.

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Q6. SSD stands for _____.

A. Solid State Drive B. Secure Storage Disk
C. System Storage DeviceD. Smart Storage Drive

Answer: A. Solid State Drive

Explanation: SSD stands for Solid State Drive, a high-speed storage device based on flash memory.

Q7. Which storage device is generally faster?

A. Floppy Disk B. Hard Disk Drive C. Solid State Drive D. CD-ROM

Answer: C. Solid State Drive

Explanation: SSDs provide much faster data access and read/write speeds than HDDs.

Q8. Which storage device is commonly connected through a USB port?

A. Pen Drive B. DVD C. Floppy Disk D. Magnetic Tape

Answer: A. Pen Drive

Explanation: A pen drive is a portable USB storage device used for transferring files.

Q9. Which of the following is an optical storage device?

A. Hard Disk B. SSD C. DVD D. Pen Drive

Answer: C. DVD

Explanation: DVDs store data using laser technology and belong to the optical storage category.

Q10. CD-ROM stands for _____.

A. Compact Disk Read Only Memory B. Compact Disc Read Only Memory
C. Computer Disc Read Only Memory D. Compact Data Read Only Memory

Answer: B. Compact Disc Read Only Memory

Explanation: CD-ROM is an optical disc used to read data but not to modify or erase it.

Q11. DVD stands for _____.

A. Digital Video Disc B. Digital Versatile Disc
C. Data Video Device D. Digital Virtual Disc

Answer: B. Digital Versatile Disc

Explanation: DVD stands for Digital Versatile Disc and can store more data than a CD.

Q12. Which optical storage device generally has the highest storage capacity?

A. CD B. DVD C. Blu-ray Disc D. Floppy Disk

Answer: C. Blu-ray Disc

Explanation: Blu-ray discs provide significantly higher storage capacity than CDs and DVDs.

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Q13. Which storage device was commonly used before CDs and DVDs?

A. SSD B. Pen Drive C. Floppy Disk D. Blu-ray Disc

Answer: C. Floppy Disk

Explanation: Floppy disks were widely used for portable storage before optical and flash storage became common.

Q14. What is the typical storage capacity of a standard CD-ROM?

A. 700 MB B. 4.7 GB C. 32 GB D. 1 TB

Answer: A. 700 MB

Explanation: A standard CD-ROM can store approximately 700 MB of data.

Q15. What is the storage capacity of a single-layer DVD?

A. 700 MB B. 4.7 GB C. 25 GB D. 1 TB

Answer: B. 4.7 GB

Explanation: A standard single-layer DVD stores about 4.7 GB of data.

Q16. Which storage device is mainly used for backup in large organizations?

A. Magnetic Tape B. Mouse C. Keyboard D. Monitor

Answer: A. Magnetic Tape

Explanation: Magnetic tapes provide a cost-effective solution for long-term backup and archival storage.

Q17. Which of the following is an example of magnetic storage?

A. Blu-ray Disc B. Hard Disk Drive C. DVD D. CD-ROM

Answer: B. Hard Disk Drive

Explanation: HDDs store data magnetically on rotating platters.

Q18. Which storage device is highly portable?

A. Pen Drive B. Internal Hard Disk C. DVD Drive D. Motherboard

Answer: A. Pen Drive

Explanation: Pen drives are lightweight, portable, and easy to carry.

Q19. Which of the following is NOT a storage device?

A. SSD B. DVD C. Monitor D. Hard Disk

Answer: C. Monitor

Explanation: A monitor is an output device, not a storage device.

Q20. Which storage device is installed inside most modern laptops for faster performance?

A. Floppy Disk B. SSD C. CD-ROM D. Magnetic Tape

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Answer: B. SSD

Explanation: Modern laptops commonly use SSDs because they offer faster boot times and improved performance.

Q21. Which storage device is read-only?

A. CD-ROM B. SSD C. Hard Disk D. Pen Drive

Answer: A. CD-ROM

Explanation: Data stored on a CD-ROM cannot be modified or erased.

Q22. Which storage device is most suitable for transferring files between computers?

A. Pen Drive B. Magnetic Tape C. Internal HDD D. Blu-ray Drive

Answer: A. Pen Drive

Explanation: Pen drives provide a convenient and portable way to transfer data.

Q23. Which storage device offers the highest speed among the following?

A. HDD B. SSD C. DVD D. Floppy Disk

Answer: B. SSD

Explanation: SSDs use flash memory and provide significantly faster data access than HDDs and optical media.

Q24. Which storage medium uses laser technology?

A. Hard Disk B. Magnetic Tape C. Optical Disc D. RAM

Answer: C. Optical Disc

Explanation: Optical discs such as CDs, DVDs, and Blu-ray discs use lasers to read and write data.

Q25. Which of the following is an example of removable storage?

A. Pen Drive B. SSD (Internal) C. CPU D. RAM

Answer: A. Pen Drive

Explanation: A pen drive can be easily connected and removed from a computer using a USB port.

Q26. Which storage device is commonly used for long-term data backup?

A. Magnetic Tape B. RAM C. Cache Memory D. Register

Answer: A. Magnetic Tape

Explanation: Magnetic tapes are reliable and economical for long-term storage and backups.

Q27. Which unit is commonly used to measure storage capacity?

A. Hertz (Hz) B. Byte (B) C. Volt (V) D. Ampere (A)

Answer: B. Byte (B)

Explanation: Storage capacity is measured in bytes and its multiples such as KB, MB, GB, and TB.

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Q28. Which of the following is arranged in increasing order of storage capacity?

A. KB → MB → GB → TB
B. GB → MB → KB → TB
C. MB → KB → TB → GB
D. TB → GB → MB → KB

Answer: A. KB → MB → GB → TB

Explanation: The correct order from smaller to larger units is Kilobyte, Megabyte, Gigabyte, and Terabyte.

Q29. Which storage device is most resistant to physical shock?

A. Hard Disk Drive
B. SSD
C. Floppy Disk
D. DVD

Answer: B. SSD

Explanation: SSDs have no moving parts, making them more resistant to physical shocks than HDDs.

Q30. Which of the following correctly classifies storage devices?

A. **Magnetic:** HDD, Magnetic Tape, Floppy Disk
Optical: CD, DVD, Blu-ray Disc
Flash: SSD, Pen Drive, Memory Card

B. **Magnetic:** SSD, Pen Drive
Optical: HDD, Tape
Flash: DVD, CD

C. **Magnetic:** Monitor, Keyboard
Optical: Printer, Scanner
Flash: Mouse, Speaker

D. **Magnetic:** CPU, RAM
Optical: Motherboard
Flash: ALU

Answer: A

Explanation: Storage devices are commonly classified as:

- **Magnetic Storage:** Hard Disk Drive (HDD), Magnetic Tape, Floppy Disk
- **Optical Storage:** CD, DVD, Blu-ray Disc
- **Flash Storage:** SSD, Pen Drive (USB Flash Drive), Memory Card

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Chapter 14: Number System

30 Multiple Choice Questions (MCQs)

Q1. What is a number system?

A. A method of printing numbers
B. A system used to represent numbers using digits and symbols
C. A type of memory
D. A programming language

Answer: B. A system used to represent numbers using digits and symbols

Explanation: A number system is a method of representing numerical values using a set of digits according to specific rules.

Q2. Which number system is commonly used by humans?

A. Binary B. Decimal C. Octal D. Hexadecimal

Answer: B. Decimal

Explanation: The Decimal Number System uses ten digits (0–9) and is the most commonly used number system.

Q3. The Decimal Number System has a base of _____.

A. 2 B. 8 C. 10 D. 16

Answer: C. 10

Explanation: The Decimal Number System uses ten digits (0–9), so its base (radix) is 10.

Q4. Which number system is used internally by computers?

A. Decimal B. Binary C. Octal D. Hexadecimal

Answer: B. Binary

Explanation: Computers process data using only two digits, 0 and 1, making Binary the fundamental number system.

Q5. The Binary Number System has a base of _____.

A. 2 B. 8 C. 10 D. 16

Answer: A. 2

Explanation: Binary uses only two digits (0 and 1), so its radix is 2.

Q6. Which digits are used in the Binary Number System?

A. 0–7 B. 0–9 C. 0 and 1 D. 0–F

Answer: C. 0 and 1

Explanation: Binary numbers consist of only two digits: 0 and 1.

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Q7. The Octal Number System has a base of _____.

A. 2 B. 8 C. 10 D. 16

Answer: B. 8

Explanation: Octal uses eight digits (0–7), so its base is 8.

Q8. Which digits are used in the Octal Number System?

A. 0–7 B. 0–8 C. 1–8 D. 0–9

Answer: A. 0–7

Explanation: The Octal Number System uses the digits 0 through 7 only.

Q9. The Hexadecimal Number System has a base of _____.

A. 2 B. 8 C. 10 D. 16

Answer: D. 16

Explanation: Hexadecimal uses sixteen symbols (0–9 and A–F), giving it a base of 16.

Q10. Which symbols are used in the Hexadecimal Number System?

A. 0–9 B. 0–7 C. 0–9 and A–F D. A–Z

Answer: C. 0–9 and A–F

Explanation: Hexadecimal uses the digits 0–9 and the letters A–F to represent values 10–15.

Q11. What is the decimal equivalent of the binary number 1010_2?

A. 8 B. 9 C. 10 D. 12

Answer: C. 10

Explanation: $1010_2 = 1 \times 2^3 + 0 \times 2^2 + 1 \times 2^1 + 0 \times 2^0 = 8 + 2 = 10.$

Q12. What is the binary equivalent of decimal 5?

A. 100 B. 101 C. 110 D. 111

Answer: B. 101

Explanation: Decimal 5 is represented as $\mathbf{101_2}$ in binary.

Q13. What is the decimal equivalent of binary 1111_2?

A. 12 B. 13 C. 14 D. 15

Answer: D. 15

Explanation: $1111_2 = 8 + 4 + 2 + 1 = 15.$

Q14. What is the binary equivalent of decimal 8?

A. 1000 B. 1001 C. 1010 D. 1111

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Answer: A. 1000

Explanation: Decimal 8 equals $\mathbf{1000_2}$.

Q15. Which hexadecimal digit represents decimal 10?

A. A B. B C. C D. D

Answer: A. A

Explanation: In hexadecimal, A represents the decimal value 10.

Q16. Which hexadecimal digit represents decimal 15?

A. D B. E C. F D. G

Answer: C. F

Explanation: In hexadecimal, F represents the decimal value 15.

Q17. Which of the following is a valid binary number?

A. 1201 B. 101101 C. 6789 D. 89AB

Answer: B. 101101

Explanation: Binary numbers contain only the digits 0 and 1.

Q18. Which of the following is a valid octal number?

A. 128 B. 765 C. 89A D. 987

Answer: B. 765

Explanation: Octal numbers contain only digits from 0 to 7.

Q19. Which of the following is a valid hexadecimal number?

A. 12G B. 1AF C. 89X D. GHI

Answer: B. 1AF

Explanation: Hexadecimal numbers use digits 0–9 and letters A–F.

Q20. What is the decimal equivalent of hexadecimal A_{16}?

A. 8 B. 9 C. 10 D. 11

Answer: C. 10

Explanation: In hexadecimal, A represents decimal 10.

Q21. Which number system is most compact for representing binary values?

A. Decimal B. Binary C. Hexadecimal D. Roman

Answer: C. Hexadecimal

Explanation: Hexadecimal provides a shorter representation of binary numbers because one hexadecimal digit equals four binary bits.

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Q22. One hexadecimal digit is equal to _____ binary bits.

A. 2 B. 3 C. 4 D. 8

Answer: C. 4

Explanation: Each hexadecimal digit corresponds exactly to four binary bits.

Q23. One octal digit is equal to _____ binary bits.

A. 2 B. 3 C. 4 D. 8

Answer: B. 3

Explanation: Each octal digit represents three binary bits.

Q24. Which number system is mainly used in computer memory addresses and programming?

A. Decimal B. Binary C. Hexadecimal D. Roman

Answer: C. Hexadecimal

Explanation: Hexadecimal is commonly used because it provides a compact representation of binary values.

Q25. The radix of the Binary Number System is _____.

A. 2 B. 8 C. 10 D. 16

Answer: A. 2

Explanation: Radix means the base of a number system. Binary has a radix of 2.

Q26. Which of the following is NOT a valid binary number?

A. 1010 B. 1101 C. 1021 D. 1111

Answer: C. 1021

Explanation: Binary numbers can contain only the digits 0 and 1.

Q27. Which of the following is NOT a valid hexadecimal number?

A. 1AF B. 9BC C. 7E2 D. 12G

Answer: D. 12G

Explanation: The letter G is not used in the hexadecimal number system.

Q28. What is the decimal equivalent of binary 10000_2?

A. 14 B. 15 C. 16 D. 17

Answer: C. 16

Explanation: $10000_2 = 1 \times 2^4 = 16$.

Q29. Which number system uses the symbols 0–9 and A–F?

A. Binary B. Decimal C. Octal D. Hexadecimal

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Answer: **D. Hexadecimal**

Explanation: Hexadecimal uses sixteen symbols: 0–9 and A–F.

Q30. Which of the following correctly matches the number system with its base?

A. Binary – 2, Octal – 8, Decimal – 10, Hexadecimal – 16

B. Binary – 8, Octal – 10, Decimal – 2, Hexadecimal – 16

C. Binary – 10, Octal – 16, Decimal – 8, Hexadecimal – 2

D. Binary – 16, Octal – 2, Decimal – 8, Hexadecimal – 10

Answer: **A**

Explanation: The four commonly used number systems are:

- **Binary:** Base 2 (0–1)
- **Octal:** Base 8 (0–7)
- **Decimal:** Base 10 (0–9)
- **Hexadecimal:** Base 16 (0–9, A–F)

Chapter 15: Data Representation

30 Multiple Choice Questions (MCQs)

Q1. What is Data Representation?

A. The process of printing documents
B. The method of representing data in binary form inside a computer
C. The process of creating software
D. The method of connecting computers

Answer: **B. The method of representing data in binary form inside a computer**

Explanation: Data representation is the method by which computers store and process data using binary digits (0 and 1).

Q2. Computers represent all types of data using _____.

A. Decimal numbers
B. Binary digits (0 and 1)
C. Roman numerals
D. Octal numbers

Answer: **B. Binary digits (0 and 1)**

Explanation: Internally, computers understand only binary language consisting of 0s and 1s.

Q3. The smallest unit of data in a computer is _____.

A. Byte B. Nibble C. Bit D. Word

Answer: **C. Bit**

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Explanation: A bit (Binary Digit) is the smallest unit of data and can have a value of either 0 or 1.

Q4. A bit can have how many possible values?

A. One B. Two C. Four D. Eight

Answer: B. Two

Explanation: A bit can represent either **0** or **1**.

Q5. How many bits make one nibble?

A. 2 B. 4 C. 8 D. 16

Answer: B. 4

Explanation: A nibble consists of **4 bits**.

Q6. How many bits are there in one byte?

A. 4 B. 8 C. 16 D. 32

Answer: B. 8

Explanation: One byte is equal to **8 bits**.

Q7. A byte can represent _____.

A. One binary digit B. One character C. One sentence D. One paragraph

Answer: B. One character

Explanation: A single byte is commonly used to represent one character such as a letter, number, or symbol.

Q8. How many bits are equal to one kilobyte (KB)?

A. 1000 bits B. 1024 bytes C. 1000 bytes D. 2048 bytes

Answer: B. 1024 bytes

Explanation: In computer memory, **1 KB = 1024 bytes**.

Q9. 1 Megabyte (MB) is equal to _____.

A. 1024 KB B. 1000 KB C. 1024 GB D. 1000 MB

Answer: A. 1024 KB

Explanation: One Megabyte consists of **1024 Kilobytes**.

Q10. 1 Gigabyte (GB) is equal to _____.

A. 1000 MB B. 1024 MB C. 1024 KB D. 1024 TB

Answer: B. 1024 MB

Explanation: One Gigabyte contains **1024 Megabytes**.

Q11. Which unit is larger than a Gigabyte?

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A. Kilobyte B. Megabyte C. Terabyte D. Byte

Answer: C. Terabyte

Explanation: The order is: Byte → KB → MB → GB → TB → PB.

Q12. Which of the following is the largest unit?

A. MB B. GB C. TB D. PB

Answer: D. PB

Explanation: Petabyte (PB) is larger than Terabyte (TB).

Q13. Which coding system is widely used to represent characters?

A. ASCII B. CPU C. ALU D. BIOS

Answer: A. ASCII

Explanation: ASCII (American Standard Code for Information Interchange) assigns binary codes to letters, numbers, and symbols.

Q14. What does ASCII stand for?

A. American Standard Code for Information Interchange

B. Automatic Standard Computer Interface

C. American Software Coding Interface

D. Automatic Storage Communication Interface

Answer: A. American Standard Code for Information Interchange

Explanation: ASCII is a standard character encoding system used in computers.

Q15. Standard ASCII uses _____ bits.

A. 6 B. 7 C. 8 D. 16

Answer: B. 7

Explanation: Standard ASCII uses **7 bits**, allowing **128 different characters**.

Q16. Extended ASCII uses _____ bits.

A. 7 B. 8 C. 16 D. 32

Answer: B. 8

Explanation: Extended ASCII uses **8 bits**, allowing **256 characters**.

Q17. Which character encoding standard supports almost all world languages?

A. ASCII B. Unicode C. BCD D. EBCDIC

Answer: B. Unicode

Explanation: Unicode supports characters from almost every language in the world.

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Q18. Unicode was developed to _____.

A. Replace the CPU
B. Support multiple languages
C. Increase RAM size
D. Improve Internet speed

Answer: B. Support multiple languages

Explanation: Unicode provides a universal character encoding system.

Q19. BCD stands for _____.

A. Binary Coded Decimal
B. Binary Computer Data
C. Basic Computer Design
D. Binary Character Display

Answer: A. Binary Coded Decimal

Explanation: BCD represents each decimal digit separately using four binary bits.

Q20. Which code is mainly used in IBM mainframe computers?

A. ASCII
B. Unicode
C. EBCDIC
D. UTF-8

Answer: C. EBCDIC

Explanation: EBCDIC (Extended Binary Coded Decimal Interchange Code) is mainly used in IBM mainframe systems.

Q21. How many possible values can be represented by one byte?

A. 64
B. 128
C. 256
D. 512

Answer: C. 256

Explanation: One byte has **8 bits**, so it can represent $2^8 = 256$ different values.

Q22. Which of the following is NOT a unit of data storage?

A. Byte
B. Kilobyte
C. Gigabyte
D. Gigahertz

Answer: D. Gigahertz

Explanation: Gigahertz (GHz) measures processor speed, not data storage.

Q23. Which of the following correctly represents increasing storage units?

A. MB → KB → GB → TB
B. Byte → KB → MB → GB
C. GB → Byte → KB → MB
D. TB → MB → Byte → KB

Answer: B. Byte → KB → MB → GB

Explanation: Storage units increase in the following order: Byte → KB → MB → GB → TB → PB.

Q24. A nibble is equal to _____.

A. 2 bits
B. 4 bits
C. 8 bits
D. 16 bits

Answer: B. 4 bits

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Explanation: A nibble is a group of **4 binary bits**.

Q25. Which of the following is used to represent text inside a computer?

A. Character Encoding B. Printer C. Monitor D. Mouse

Answer: A. Character Encoding

Explanation: Character encoding standards such as ASCII and Unicode convert characters into binary codes.

Q26. Which of the following uses binary representation internally?

A. Computer B. Calculator C. Mobile Phone D. All of the above

Answer: D. All of the above

Explanation: All modern digital devices internally represent and process data in binary form.

Q27. Which storage unit is equal to 1024 GB?

A. MB B. TB C. PB D. KB

Answer: B. TB

Explanation: 1 Terabyte (TB) = 1024 Gigabytes (GB).

Q28. Which of the following is TRUE?

A. 1 Byte = 4 Bits B. 1 Byte = 8 Bits C. 1 KB = 100 Bytes D. 1 MB = 100 KB

Answer: B. 1 Byte = 8 Bits

Explanation: A byte consists of exactly **8 bits**.

Q29. Which coding standard is most suitable for multilingual applications?

A. ASCII B. BCD C. Unicode D. EBCDIC

Answer: C. Unicode

Explanation: Unicode supports thousands of characters from different languages, making it ideal for multilingual computing.

Q30. Which of the following correctly matches the data representation terms?

A. **Bit – Smallest Unit**

Nibble – 4 Bits

Byte – 8 Bits

ASCII – Character Code

Unicode – Universal Character Encoding

B. **Bit – 8 Bits**

Byte – 4 Bits

ASCII – Memory Unit

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Unicode – Processor

C. **Bit – Storage Device**

Byte – Printer

ASCII – CPU

Unicode – RAM

D. **Bit – Keyboard**

Nibble – Mouse

Byte – Monitor

Unicode – Scanner

Answer: A

Explanation:

- **Bit:** Smallest unit of data (0 or 1)
- **Nibble:** Group of 4 bits
- **Byte:** Group of 8 bits, usually represents one character
- **ASCII:** Character encoding standard
- **Unicode:** Universal character encoding system supporting multiple languages and symbols

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