|  |  |
| --- | --- |
| QN=1 | Who is known as the "Father of the Computer"? |
| a. | Alan Turing |
| b. | Charles Babbage |
| c. | Steve Jobs |
| d. | Bill Gates |
| e. |  |
| f. |  |
| ANSWER: | B |
| MARK: | 1 |
| UNIT: | 1.2 |
| LO: | CLO1 |
| MIX CHOICES: | Yes |
| CREATOR-REVIEWER: | LongNQ9 - TraPT4 |
| EDITOR: | LongNQ9 |
| REFERENCE: | 5-Foundations of Computer Science |

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| QN=2 | Which of the following is a non-volatile storage device? |
| a. | SSD |
| b. | RAM |
| c. | CPU Cache |
| d. | Registers |
| e. |  |
| f. |  |
| ANSWER: | A |
| MARK: | 1 |
| UNIT: | 1.3 |
| LO: | CLO1 |
| MIX CHOICES: | Yes |
| CREATOR-REVIEWER: | LongNQ9 - TraPT4 |
| EDITOR: | LongNQ9 |
| REFERENCE: | 5-Foundations of Computer Science |

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| QN=3 | What is the primary function of the motherboard in a computer? |
| a. | To store data permanently |
| b. | To supply power to the computer |
| c. | To connect all the parts of the computer together |
| d. | To cool down the components |
| e. |  |
| f. |  |
| ANSWER: | C |
| MARK: | 1 |
| UNIT: | 1.6 |
| LO: | CLO1 |
| MIX CHOICES: | Yes |
| CREATOR-REVIEWER: | LongNQ9 - TraPT4 |
| EDITOR: | LongNQ9 |
| REFERENCE: | 5-Foundations of Computer Science |

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| QN=4 | What was the name of the first electronic general-purpose computer? |
| a. | ENIAC |
| b. | UNIVAC |
| c. | IBM PC |
| d. | Apple I |
| e. |  |
| f. |  |
| ANSWER: | A |
| MARK: | 1 |
| UNIT: | 1.1 |
| LO: | CLO1 |
| MIX CHOICES: | Yes |
| CREATOR-REVIEWER: | LongNQ9 - TraPT4 |
| EDITOR: | LongNQ9 |
| REFERENCE: | 93-Foundations of Computer Science |

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| QN=5 | What is the main function of the control unit in the CPU? |
| a. | To perform arithmetic and logic operations. |
| b. | To store instructions. |
| c. | To manage data flow inside the CPU. |
| d. | To control peripheral devices. |
| e. |  |
| f. |  |
| ANSWER: | C |
| MARK: | 1 |
| UNIT: | 1.4 |
| LO: | CLO1 |
| MIX CHOICES: | Yes |
| CREATOR-REVIEWER: | LongNQ9 - TraPT4 |
| EDITOR: | LongNQ9 |
| REFERENCE: | 11-Foundations of Computer Science |

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| QN=6 | What base does the hexadecimal number system use? |
| a. | Base 2 |
| b. | Base 10 |
| c. | Base 16 |
| d. | Base 64 |
| e. |  |
| f. |  |
| ANSWER: | C |
| MARK: | 1 |
| UNIT: | 2.2 |
| LO: | CLO2 |
| MIX CHOICES: | Yes |
| CREATOR-REVIEWER: | LongNQ9 - TraPT4 |
| EDITOR: | LongNQ9 |
| REFERENCE: | 23-Foundations of Computer Science |

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| QN=7 | Which of the following represents the decimal number 26 in hexadecimal? |
| a. | 1A |
| b. | 2B |
| c. | 1F |
| d. | 2A |
| e. |  |
| f. |  |
| ANSWER: | A |
| MARK: | 1 |
| UNIT: | 2.4 |
| LO: | CLO2 |
| MIX CHOICES: | Yes |
| CREATOR-REVIEWER: | LongNQ9 - TraPT4 |
| EDITOR: | LongNQ9 |
| REFERENCE: | 24-Foundations of Computer Science |

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| QN=8 | If a byte represents a binary number, how many different values can it represent? |
| a. | 64 |
| b. | 128 |
| c. | 256 |
| d. | 512 |
| e. |  |
| f. |  |
| ANSWER: | C |
| MARK: | 1 |
| UNIT: | 2.1 |
| LO: | CLO2 |
| MIX CHOICES: | Yes |
| CREATOR-REVIEWER: | LongNQ9 - TraPT4 |
| EDITOR: | LongNQ9 |
| REFERENCE: | 27-Foundations of Computer Science |

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| QN=9 | Convert the decimal number 213.75 to octal |
| a. | 325.6 |
| b. | 225.7 |
| c. | 235.6 |
| d. | 322.5 |
| e. |  |
| f. |  |
| ANSWER: | A |
| MARK: | 1 |
| UNIT: | 2.3 |
| LO: | CLO2 |
| MIX CHOICES: | Yes |
| CREATOR-REVIEWER: | LongNQ9 - TraPT4 |
| EDITOR: | LongNQ9 |
| REFERENCE: | 28-Foundations of Computer Science |

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| QN=10 | In floating-point representation, what are the two main components used? |
| a. | Mantissa and Exponent |
| b. | Real and Imaginary |
| c. | Sign and Magnitude |
| d. | Base and Variable |
| e. |  |
| f. |  |
| ANSWER: | A |
| MARK: | 1 |
| UNIT: | 3.1 |
| LO: | CLO3 |
| MIX CHOICES: | Yes |
| CREATOR-REVIEWER: | LongNQ9 - TraPT4 |
| EDITOR: | LongNQ9 |
| REFERENCE: | 52-Foundations of Computer Science |

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| QN=11 | Which IEEE standard is most commonly used for representing floating-point numbers in computers? |
| a. | IEEE 754 |
| b. | IEEE 802 |
| c. | IEEE 1284 |
| d. | IEEE 1394 |
| e. |  |
| f. |  |
| ANSWER: | A |
| MARK: | 1 |
| UNIT: | 3.1 |
| LO: | CLO3 |
| MIX CHOICES: | Yes |
| CREATOR-REVIEWER: | LongNQ9 - TraPT4 |
| EDITOR: | LongNQ9 |
| REFERENCE: | 535-Foundations of Computer Science |

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| QN=12 | What does the 'bit depth' of a bitmap image refer to? |
| a. | The size of the file in bits |
| b. | The compression ratio used in the image |
| c. | The number of bits used to represent the color of each pixel |
| d. | The resolution of the image in pixels per inch |
| e. |  |
| f. |  |
| ANSWER: | C |
| MARK: | 1 |
| UNIT: | 3.5 |
| LO: | CLO3 |
| MIX CHOICES: | Yes |
| CREATOR-REVIEWER: | LongNQ9 - TraPT4 |
| EDITOR: | LongNQ9 |
| REFERENCE: | 62-Foundations of Computer Science |

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| QN=13 | What is the purpose of encoding in digital audio? |
| a. | To improve the quality of the sound |
| b. | To convert audio into a format suitable for storage or transmission |
| c. | To increase the speed of audio playback |
| d. | To reduce the number of channels used in the audio |
| e. |  |
| f. |  |
| ANSWER: | B |
| MARK: | 1 |
| UNIT: | 3.3 |
| LO: | CLO3 |
| MIX CHOICES: | Yes |
| CREATOR-REVIEWER: | LongNQ9 - TraPT4 |
| EDITOR: | LongNQ9 |
| REFERENCE: | 63-Foundations of Computer Science |

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| QN=14 | Which shift operation would you use to divide a signed integer by 2? |
| a. | Logical right shift |
| b. | Arithmetic right shift |
| c. | Logical left shift |
| d. | Arithmetic left shift |
| e. |  |
| f. |  |
| ANSWER: | B |
| MARK: | 1 |
| UNIT: | 3.7 |
| LO: | CLO3 |
| MIX CHOICES: | Yes |
| CREATOR-REVIEWER: | LongNQ9 - TraPT4 |
| EDITOR: | LongNQ9 |
| REFERENCE: | 74-Foundations of Computer Science |

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| QN=15 | What is the result of the OR bitwise operation on the bit patterns 1100 and 1010? |
| a. | 0110 |
| b. | 1001 |
| c. | 1110 |
| d. | 2112 |
| e. |  |
| f. |  |
| ANSWER: | C |
| MARK: | 1 |
| UNIT: | 3.6 |
| LO: | CLO3 |
| MIX CHOICES: | Yes |
| CREATOR-REVIEWER: | LongNQ9 - TraPT4 |
| EDITOR: | LongNQ9 |
| REFERENCE: | 83-Foundations of Computer Science |

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| QN=16 | In the TCP/IP model, which layer corresponds to both Data Link and Physical layers of the OSI model? |
| a. | Network Access Layer |
| b. | Internet Layer |
| c. | Transport Layer |
| d. | Application Layer |
| e. |  |
| f. |  |
| ANSWER: | A |
| MARK: | 1 |
| UNIT: | 4.1 |
| LO: | CLO4 |
| MIX CHOICES: | Yes |
| CREATOR-REVIEWER: | LongNQ9 - TraPT4 |
| EDITOR: | LongNQ9 |
| REFERENCE: | 143-Foundations of Computer Science |

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| QN=17 | Which layer of the TCP/IP model is responsible for logical addressing and routing of packets between different networks? |
| a. | Network Access Layer |
| b. | Transport Layer |
| c. | Internet Layer |
| d. | Application Layer |
| e. |  |
| f. |  |
| ANSWER: | C |
| MARK: | 1 |
| UNIT: | 4.4 |
| LO: | CLO4 |
| MIX CHOICES: | Yes |
| CREATOR-REVIEWER: | LongNQ9 - TraPT4 |
| EDITOR: | LongNQ9 |
| REFERENCE: | 159-Foundations of Computer Science |

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| QN=18 | Which of the following is a key principle of monoprogramming? |
| a. | Concurrent execution of multiple processes |
| b. | Efficient utilization of system resources |
| c. | Dynamic allocation of memory |
| d. | Shared memory space among processes |
| e. |  |
| f. |  |
| ANSWER: | B |
| MARK: | 1 |
| UNIT: | 5.3 |
| LO: | CLO5 |
| MIX CHOICES: | Yes |
| CREATOR-REVIEWER: | LongNQ9 - TraPT4 |
| EDITOR: | LongNQ9 |
| REFERENCE: | 192-Foundations of Computer Science |

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| QN=19 | What is the primary purpose of a metadata-based file manager? |
| a. | To organize files based on their content type |
| b. | To store additional information about files, such as author, creation date, and keywords |
| c. | To encrypt files for enhanced security |
| d. | To compress files to save disk space |
| e. |  |
| f. |  |
| ANSWER: | B |
| MARK: | 1 |
| UNIT: | 5.7 |
| LO: | CLO5 |
| MIX CHOICES: | Yes |
| CREATOR-REVIEWER: | LongNQ9 - TraPT4 |
| EDITOR: | LongNQ9 |
| REFERENCE: | 203-Foundations of Computer Science |

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| QN=20 | Which sorting algorithm is the most efficient in terms of space complexity, requiring only a constant amount of additional memory? |
| a. | Bubble Sort |
| b. | Selection Sort |
| c. | Insertion Sort |
| d. | They all require the same amount of additional memory |
| e. |  |
| f. |  |
| ANSWER: | A |
| MARK: | 1 |
| UNIT: | 6.4 |
| LO: | CLO6 |
| MIX CHOICES: | Yes |
| CREATOR-REVIEWER: | LongNQ9 - TraPT4 |
| EDITOR: | LongNQ9 |
| REFERENCE: | 226-Foundations of Computer Science |

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| QN=21 | Which of the following statements accurately describes the relationship between O(n) and O(log n)? |
| a. | O(n) grows faster than O(log n). |
| b. | O(n) and O(log n) have the same growth rate. |
| c. | O(n) grows slower than O(log n). |
| d. | O(n) and O(log n) are not comparable. |
| e. |  |
| f. |  |
| ANSWER: | A |
| MARK: | 1 |
| UNIT: | 6.1 |
| LO: | CLO6 |
| MIX CHOICES: | Yes |
| CREATOR-REVIEWER: | LongNQ9 - TraPT4 |
| EDITOR: | LongNQ9 |
| REFERENCE: | 217-Foundations of Computer Science |

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| QN=22 | Which of the following pseudo-code constructs is commonly used to represent a repetitive process until a certain condition is met? |
| a. | FOR loop |
| b. | WHILE loop |
| c. | IF statement |
| d. | SWITCH statement |
| e. |  |
| f. |  |
| ANSWER: | B |
| MARK: | 1 |
| UNIT: | 6.2 |
| LO: | CLO6 |
| MIX CHOICES: | Yes |
| CREATOR-REVIEWER: | LongNQ9 - TraPT4 |
| EDITOR: | LongNQ9 |
| REFERENCE: | 219-Foundations of Computer Science |

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| QN=23 | Which of the following UML diagram types is most suitable for representing the flow of control within an algorithm, including loops and conditional statements? |
| a. | Class diagram |
| b. | Sequence diagram |
| c. | Activity diagram |
| d. | State diagram |
| e. |  |
| f. |  |
| ANSWER: | C |
| MARK: | 1 |
| UNIT: | 6.2 |
| LO: | CLO6 |
| MIX CHOICES: | Yes |
| CREATOR-REVIEWER: | LongNQ9 - TraPT4 |
| EDITOR: | LongNQ9 |
| REFERENCE: | 228-Foundations of Computer Science |

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| QN=24 | Which programming paradigm emphasizes defining what should be computed rather than how it should be computed? |
| a. | Functional programming |
| b. | Imperative programming |
| c. | Object-oriented programming |
| d. | Procedural programming |
| e. |  |
| f. |  |
| ANSWER: | A |
| MARK: | 1 |
| UNIT: | 7.2.1 |
| LO: | CLO7 |
| MIX CHOICES: | Yes |
| CREATOR-REVIEWER: | LongNQ9 - TraPT4 |
| EDITOR: | LongNQ9 |
| REFERENCE: | 254-Foundations of Computer Science |

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| QN=25 | Which principle of OOP encourages bundling data and methods that operate on the data into a single unit, known as a class? |
| a. | Inheritance |
| b. | Encapsulation |
| c. | Polymorphism |
| d. | Abstraction |
| e. |  |
| f. |  |
| ANSWER: | B |
| MARK: | 1 |
| UNIT: | 7.2.3 |
| LO: | CLO7 |
| MIX CHOICES: | Yes |
| CREATOR-REVIEWER: | LongNQ9 - TraPT4 |
| EDITOR: | LongNQ9 |
| REFERENCE: | 252-Foundations of Computer Science |

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| QN=26 | Which of the following software development methodologies emphasizes iterative development, collaboration among cross-functional teams, and frequent customer feedback? |
| a. | Waterfall model |
| b. | Agile methodology |
| c. | Spiral model |
| d. | RAD (Rapid Application Development) |
| e. |  |
| f. |  |
| ANSWER: | B |
| MARK: | 1 |
| UNIT: | 8.1 |
| LO: | CLO8 |
| MIX CHOICES: | Yes |
| CREATOR-REVIEWER: | LongNQ9 - TraPT4 |
| EDITOR: | LongNQ9 |
| REFERENCE: | 274-Foundations of Computer Science |

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| QN=27 | Which software engineering principle advocates breaking down complex systems into smaller, manageable components that are easier to understand, develop, and maintain? |
| a. | Abstraction |
| b. | Encapsulation |
| c. | Modularity |
| d. | Inheritance |
| e. |  |
| f. |  |
| ANSWER: | C |
| MARK: | 1 |
| UNIT: | 8.3 |
| LO: | CLO8 |
| MIX CHOICES: | Yes |
| CREATOR-REVIEWER: | LongNQ9 - TraPT4 |
| EDITOR: | LongNQ9 |
| REFERENCE: | 279-Foundations of Computer Science |

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| QN=28 | What is the primary deliverable of the analysis phase in the SDLC? |
| a. | Source code |
| b. | User documentation |
| c. | Software architecture diagram |
| d. | Requirements specification document |
| e. |  |
| f. |  |
| ANSWER: | D |
| MARK: | 1 |
| UNIT: | 8.2 |
| LO: | CLO8 |
| MIX CHOICES: | Yes |
| CREATOR-REVIEWER: | LongNQ9 - TraPT4 |
| EDITOR: | LongNQ9 |
| REFERENCE: | 275-Foundations of Computer Science |

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| QN=29 | In the context of software development, what does the term "refactoring" refer to? |
| a. | Rewriting code from scratch to improve performance |
| b. | Adding new features to existing software without changing its external behavior |
| c. | Optimizing code to reduce memory usage |
| d. | Restructuring existing code to improve readability, maintainability, and efficiency |
| e. |  |
| f. |  |
| ANSWER: | D |
| MARK: | 1 |
| UNIT: | 8.2 |
| LO: | CLO8 |
| MIX CHOICES: | Yes |
| CREATOR-REVIEWER: | LongNQ9 - TraPT4 |
| EDITOR: | LongNQ9 |
| REFERENCE: | 277-Foundations of Computer Science |

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| QN=30 | Which testing technique focuses on identifying defects and vulnerabilities of the software by examining its internal structure, code, and logic? |
| a. | Black-box testing |
| b. | Integration testing |
| c. | White-box testing |
| d. | User acceptance testing |
| e. |  |
| f. |  |
| ANSWER: | C |
| MARK: | 1 |
| UNIT: | 8.5 |
| LO: | CLO8 |
| MIX CHOICES: | Yes |
| CREATOR-REVIEWER: | LongNQ9 - TraPT4 |
| EDITOR: | LongNQ9 |
| REFERENCE: | 283-Foundations of Computer Science |

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| QN=31 | Which of the following statements about records’ data types is correct? |
| a. | Records cannot contain other records as fields. |
| b. | Records are immutable data types. |
| c. | Records have a fixed size that cannot be changed at runtime. |
| d. | Records can have fields of different data types. |
| e. |  |
| f. |  |
| ANSWER: | D |
| MARK: | 1 |
| UNIT: | 9.3 |
| LO: | CLO9 |
| MIX CHOICES: | Yes |
| CREATOR-REVIEWER: | LongNQ9 - TraPT4 |
| EDITOR: | LongNQ9 |
| REFERENCE: | 301-Foundations of Computer Science |

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| QN=32 | Which of the following scenarios would be most suitable for using a stack data structure? |
| a. | Storing elements in a first-in-first-out (FIFO) order |
| b. | Evaluating arithmetic expressions with multiple operands and operators |
| c. | Sorting elements in ascending order |
| d. | Storing elements in a sorted sequence |
| e. |  |
| f. |  |
| ANSWER: | B |
| MARK: | 1 |
| UNIT: | 9.4 |
| LO: | CLO9 |
| MIX CHOICES: | Yes |
| CREATOR-REVIEWER: | LongNQ9 - TraPT4 |
| EDITOR: | LongNQ9 |
| REFERENCE: | 340-Foundations of Computer Science |

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| QN=33 | What is the time complexity of finding the height of a binary tree with n nodes? |
| a. | O(n) |
| b. | O(log n) |
| c. | O(n^2) |
| d. | O(n log n) |
| e. |  |
| f. |  |
| ANSWER: | A |
| MARK: | 1 |
| UNIT: | 9.5 |
| LO: | CLO9 |
| MIX CHOICES: | Yes |
| CREATOR-REVIEWER: | LongNQ9 - TraPT4 |
| EDITOR: | LongNQ9 |
| REFERENCE: | 338-Foundations of Computer Science |

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| QN=34 | Which access method is best suited for retrieving records based on a key value in a file with a large number of records? |
| a. | Sequential access |
| b. | Direct access |
| c. | Indexed sequential access |
| d. | Hashing |
| e. |  |
| f. |  |
| ANSWER: | D |
| MARK: | 1 |
| UNIT: | 10.2 |
| LO: | CLO10 |
| MIX CHOICES: | Yes |
| CREATOR-REVIEWER: | LongNQ9 - TraPT4 |
| EDITOR: | LongNQ9 |
| REFERENCE: | 354-Foundations of Computer Science |

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| QN=35 | Which access method typically requires additional space for maintaining an index structure but provides faster access to records compared to sequential access? |
| a. | Sequential access |
| b. | Direct access |
| c. | Indexed sequential access |
| d. | Hashing |
| e. |  |
| f. |  |
| ANSWER: | C |
| MARK: | 1 |
| UNIT: | 10.2 |
| LO: | CLO10 |
| MIX CHOICES: | Yes |
| CREATOR-REVIEWER: | LongNQ9 - TraPT4 |
| EDITOR: | LongNQ9 |
| REFERENCE: | 354-Foundations of Computer Science |

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| QN=36 | Which of the following is NOT a component of the ACID properties in database transactions? |
| a. | Atomicity |
| b. | Consistency |
| c. | Integrity |
| d. | Durability |
| e. |  |
| f. |  |
| ANSWER: | C |
| MARK: | 1 |
| UNIT: | 11.1 |
| LO: | CLO11 |
| MIX CHOICES: | Yes |
| CREATOR-REVIEWER: | LongNQ9 - TraPT4 |
| EDITOR: | LongNQ9 |
| REFERENCE: | 370-Foundations of Computer Science |

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| QN=37 | Which of the following is NOT a characteristic of the relational database model? |
| a. | Data is stored in tables with rows and columns. |
| b. | Each table has a primary key to uniquely identify each row. |
| c. | Relationships between tables are established using pointers. |
| d. | Data integrity is enforced using constraints such as foreign keys. |
| e. |  |
| f. |  |
| ANSWER: | C |
| MARK: | 1 |
| UNIT: | 11.3 |
| LO: | CLO11 |
| MIX CHOICES: | Yes |
| CREATOR-REVIEWER: | LongNQ9 - TraPT4 |
| EDITOR: | LongNQ9 |
| REFERENCE: | 374-Foundations of Computer Science |

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| QN=38 | Which of the following database models is designed specifically for handling data structures and organized as an inverted tree? |
| a. | Relational database model |
| b. | Object-oriented database model |
| c. | Network database model |
| d. | Hierarchical database model |
| e. |  |
| f. |  |
| ANSWER: | D |
| MARK: | 1 |
| UNIT: | 11.3 |
| LO: | CLO11 |
| MIX CHOICES: | Yes |
| CREATOR-REVIEWER: | LongNQ9 - TraPT4 |
| EDITOR: | LongNQ9 |
| REFERENCE: | 373-Foundations of Computer Science |

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| QN=39 | Which normal form ensures that every non-prime attribute of a relation is fully functionally dependent on the primary key? |
| a. | First Normal Form (1NF) |
| b. | Second Normal Form (2NF) |
| c. | Third Normal Form (3NF) |
| d. | Boyce-Codd Normal Form (BCNF) |
| e. |  |
| f. |  |
| ANSWER: | B |
| MARK: | 1 |
| UNIT: | 11.5 |
| LO: | CLO11 |
| MIX CHOICES: | Yes |
| CREATOR-REVIEWER: | LongNQ9 - TraPT4 |
| EDITOR: | LongNQ9 |
| REFERENCE: | 384-Foundations of Computer Science |

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| QN=40 | Which security goal focuses on protecting data from unauthorized access or disclosure? |
| a. | Confidentiality |
| b. | Integrity |
| c. | Availability |
| d. | Non-repudiation |
| e. |  |
| f. |  |
| ANSWER: | A |
| MARK: | 1 |
| UNIT: | 12.1 |
| LO: | CLO12 |
| MIX CHOICES: | Yes |
| CREATOR-REVIEWER: | LongNQ9 - TraPT4 |
| EDITOR: | LongNQ9 |
| REFERENCE: | 412-Foundations of Computer Science |

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| QN=41 | Which of the following is a key strength of asymmetric cryptography compared to symmetric cryptography? |
| a. | Asymmetric cryptography is faster for encryption and decryption. |
| b. | Asymmetric cryptography requires less computational resources. |
| c. | Asymmetric cryptography eliminates the need for key distribution. |
| d. | Asymmetric cryptography provides better security for key exchange. |
| e. |  |
| f. |  |
| ANSWER: | D |
| MARK: | 1 |
| UNIT: | 12.2 |
| LO: | CLO12 |
| MIX CHOICES: | Yes |
| CREATOR-REVIEWER: | LongNQ9 - TraPT4 |
| EDITOR: | LongNQ9 |
| REFERENCE: | 423-Foundations of Computer Science |

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| QN=42 | In message authentication, what is the purpose of a Message Authentication Code (MAC)? |
| a. | To encrypt the message for secure transmission |
| b. | To verify the integrity and authenticity of the message |
| c. | To compress the message for efficient storage |
| d. | To generate a unique identifier for the message |
| e. |  |
| f. |  |
| ANSWER: | B |
| MARK: | 1 |
| UNIT: | 12.3 |
| LO: | CLO12 |
| MIX CHOICES: | Yes |
| CREATOR-REVIEWER: | LongNQ9 - TraPT4 |
| EDITOR: | LongNQ9 |
| REFERENCE: | 430-Foundations of Computer Science |

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| QN=43 | Which type of firewall operates at the application layer of the OSI model and can inspect and filter traffic based on application-specific rules? |
| a. | Packet-filtering firewall |
| b. | Stateful inspection firewall |
| c. | Proxy firewall |
| d. | Network address translation (NAT) firewall |
| e. |  |
| f. |  |
| ANSWER: | C |
| MARK: | 1 |
| UNIT: | 12.6 |
| LO: | CLO12 |
| MIX CHOICES: | Yes |
| CREATOR-REVIEWER: | LongNQ9 - TraPT4 |
| EDITOR: | LongNQ9 |
| REFERENCE: | 444-Foundations of Computer Science |

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| QN=44 | Which of the following firewall deployment architectures involves placing a firewall between the internal network and the internet, inspecting all traffic passing between the two? |
| a. | Network-based firewall |
| b. | Host-based firewall |
| c. | Demilitarized Zone (DMZ) |
| d. | Intrusion Detection System (IDS) |
| e. |  |
| f. |  |
| ANSWER: | A |
| MARK: | 1 |
| UNIT: | 12.6 |
| LO: | CLO12 |
| MIX CHOICES: | Yes |
| CREATOR-REVIEWER: | LongNQ9 - TraPT4 |
| EDITOR: | LongNQ9 |
| REFERENCE: | 445-Foundations of Computer Science |

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| QN=45 | In an expert system, what is the purpose of the knowledge base? |
| a. | To provide a user interface for interacting with the system |
| b. | To store the domain-specific knowledge acquired from experts |
| c. | To perform reasoning and inference to solve problems |
| d. | To generate explanations and justifications for the system's decisions |
| e. |  |
| f. |  |
| ANSWER: | B |
| MARK: | 1 |
| UNIT: | 13.2 |
| LO: | CLO12 |
| MIX CHOICES: | Yes |
| CREATOR-REVIEWER: | LongNQ9 - TraPT4 |
| EDITOR: | LongNQ9 |
| REFERENCE: | 485-Foundations of Computer Science |

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| QN=46 | What is the purpose of dropout regularization in deep learning? |
| a. | To prevent overfitting by randomly dropping out a fraction of neurons during training |
| b. | To adjust the learning rate dynamically based on the performance of the network |
| c. | To initialize the weights of the network using a Gaussian distribution |
| d. | To optimize the parameters of the network using gradient descent |
| e. |  |
| f. |  |
| ANSWER: | A |
| MARK: | 1 |
| UNIT: | 13.3 |
| LO: | CLO13 |
| MIX CHOICES: | Yes |
| CREATOR-REVIEWER: | LongNQ9 - TraPT4 |
| EDITOR: | LongNQ9 |
| REFERENCE: | 499-Foundations of Computer Science |

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| QN=47 | Which of the following traversal methods of a binary tree is used to get a sorted list of elements? |
| a. | Pre-order traversal |
| b. | In-order traversal |
| c. | Post-order traversal |
| d. | Level-order traversal |
| e. |  |
| f. |  |
| ANSWER: | B |
| MARK: | 1 |
| UNIT: | 9.5 |
| LO: | CLO9 |
| MIX CHOICES: | Yes |
| CREATOR-REVIEWER: | LongNQ9 - TraPT4 |
| EDITOR: | LongNQ9 |
| REFERENCE: | 339-Foundations of Computer Science |

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| QN=48 | In the context of software design, what is the significance of the "Software Architecture"? |
| a. | It focuses on coding individual functions and procedures. |
| b. | It defines the overall structure and organization of the software system. |
| c. | It is a tool for project management. |
| d. | It involves testing the software against user requirements. |
| e. |  |
| f. |  |
| ANSWER: | B |
| MARK: | 1 |
| UNIT: | 8.1 |
| LO: | CLO8 |
| MIX CHOICES: | Yes |
| CREATOR-REVIEWER: | LongNQ9 - TraPT4 |
| EDITOR: | LongNQ9 |
| REFERENCE: | 279-Foundations of Computer Science |

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| QN=49 | What is the purpose of the TCP SYN-ACK handshake during connection establishment? |
| a. | To acknowledge the receipt of data segments |
| b. | To synchronize sequence numbers and establish connection parameters |
| c. | To request retransmission of lost segments |
| d. | To terminate the connection |
| e. |  |
| f. |  |
| ANSWER: | B |
| MARK: | 1 |
| UNIT: | 4.5 |
| LO: | CLO4 |
| MIX CHOICES: | Yes |
| CREATOR-REVIEWER: | LongNQ9 - TraPT4 |
| EDITOR: | LongNQ9 |
| REFERENCE: | 156-Foundations of Computer Science |

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| QN=50 | Which cryptographic protocol forms the foundation of HTTPS for secure communication over the internet? |
| a. | RSA |
| b. | SSL/TLS |
| c. | AES |
| d. | SHA-256 |
| e. |  |
| f. |  |
| ANSWER: | B |
| MARK: | 1 |
| UNIT: | 4.6 |
| LO: | CLO4 |
| MIX CHOICES: | Yes |
| CREATOR-REVIEWER: | LongNQ9 - TraPT4 |
| EDITOR: | LongNQ9 |
| REFERENCE: | 157-Foundations of Computer Science |