

You are the administrator of an active directory domain. A user complains to you that he is unable to change his password. No other users have this issue. What is the most likely cause of the problem?

a. Insufficient login credentials

b. The property "User cannot change password" has been enabled when it was created

He is a member of the Administrators group



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The most likely cause of the problem is:

b. The property "User cannot change password" has been enabled when it was created.

Since the user is a member of the Administrators group, insufficient login credentials is unlikely. If this property is enabled, it would prevent the user from changing their password, even if they have the necessary permissions.

How does AI contribute to gaining insight into human intelligence?

a. By replicating human cognitive processes exactly

b. By relying solely on predetermined rules and algorithms

c. By analyzing large datasets to uncover patterns and correlations

d. By disregarding the complexities of human cognition.



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The correct option is:

c. By analyzing large datasets to uncover patterns and correlations.

AI contributes to gaining insight into human intelligence by processing vast amounts of data, identifying trends, and revealing underlying patterns that can inform our understanding of human cognition.

If a problem can be broken into sub-problems that are reused several times, the problem possesses property.

- a. Memoization
- b. Optimal substructure
- c. Greedy
- d. Overlapping sub-problems



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The correct option is:

d. Overlapping sub-problems.

This property indicates that a problem can be divided into smaller sub-problems that recur multiple times, making it suitable for optimization techniques like dynamic programming.

In knowledge Representation (KR) how we do represent "how to drive a car"?

- a. Declarative knowledge
- b. Transition knowledge
- c. Procedural knowledge
- Od. Information Knowledge



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The correct option is:

c. Procedural knowledge.

Procedural knowledge refers to knowing how to perform tasks and actions, such as driving a car, which involves a series of steps and skills.

What is the difference between OLTP and OLAP databases?

Oa. OLTP databases store historical data, while OLAP databases store real-time data

Ob. OLTP databases are optimized for read-heavy workloads, while OLAP databases are optimized for write heavy workloads

Oc. OLTP databases are used for online transaction processing, while OLAP databases are used for online analytical processing.

Od. OLTP databases are used for online analytical processing, while OLAP databases are used for online transaction processing

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The correct option is:

c. OLTP databases are used for online transaction processing, while OLAP databases are used for online analytical processing.

OLTP systems are designed for managing transactional data, while OLAP systems are optimized for complex queries and data analysis.

Which ACID property ensures that a transaction either completes in its entirety or has no effect at all?

a. Atomicity

b. Durability

Oc. Consistency

d. Isolation



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The correct option is:

a. Atomicity.

Atomicity ensures that a transaction is treated as a single, indivisible unit, meaning it either completes fully or has no effect at all.

What is the postfix expression for the given infix $(2 + 3) ^ * (4 + 5)$ notation?

- O a. $2 + 3 4 ^ * +$
- b. $2 3 + 4 5 + ^ +$
- c. $2 3 4 ^ * + 5 +$
- Od. $2 + 3 ^ * 4 + 5$



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The correct postfix expression for the given infix expression $(2+3)*(4+5)(2 + 3) ^ * (4 + 5)(2+3)*(4+5)$ is:

****b. $2 3 + 4 5 + ^ *$**

This converts the infix expression to postfix (also known as Reverse Polish Notation).

What is the primary objective of reinforcement learning in artificial intelligence?

- Oa. To mimic human decision-making processes
- Ob. To categorize data into predefined classes or clusters
- Oc. To identify patterns and correlations in data
- Od. To maximize cumulative reward through sequential decision-making



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The correct option is:

d. To maximize cumulative reward through sequential decision-making.

Reinforcement learning focuses on training agents to make decisions that maximize their long-term rewards through interactions with an environment.

If an optimal solution can be created for a problem by constructing optimal solutions for its sub-problems, the problem possesses property.

- O a. Greedy
- Ob. Optimal substructure
- Oc. Memoization
- Od. Overlapping sub-problems

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The correct option is:

b. Optimal substructure.

This property indicates that an optimal solution to a problem can be formed from optimal solutions of its sub-problems.

One of the following is not the main advantage of multiprogramming?

- a. Copying one's programs or data; using system resources (CPU, memory, disk space, peripherals) without proper accounting.
- b. The CPU switches from program to program, running each for tens or hundreds of milliseconds. This provides economical interactive use of a system.
- c. Attempts to increase CPU utilization by always having something for the CPU to execute.
- d. Makes efficient use of the CPU by overlapping the demands for the CPU and its VO devices from various users

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The correct option is:

a. Copying one's programs or data; using system resources (CPU, memory, disk space, peripherals) without proper accounting.

This option does not represent an advantage of multiprogramming; instead, it suggests a lack of proper resource management.

Which one of the following is not a method of an expression for algorithms?

a. Natural language

Ob. Programming language

c. Pseudo-code

Od. Flowchart



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The correct option is:

b. Programming language.

While programming languages are used to implement algorithms, they are not typically considered a method for expressing algorithms in a high-level, abstract manner like natural language, pseudo-code, or flowcharts.

In a healthcare database system, which concept is crucial for ensuring patient data privacy and security?

Oa. Data Warehousing

b. Data Mining

Oc. Data Encryption

Od. Data Replication



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Poe

The correct option is:

c. Data Encryption.

Data encryption is crucial for ensuring patient data privacy and security, as it protects sensitive information from unauthorized access and breaches.

What is a foreign key in a relational database?

- Oa. A field in one table that refers to the primary key in another table
- Ob. A key used for accessing external data sources
- Oc. A key used for indexing primary keys
- Od. A key used for encryption purposes



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The correct option is:

a. A field in one table that refers to the primary key in another table.

A foreign key establishes a relationship between two tables by linking one table's field to the primary key of another table.

Which programming paradigm emphasizes breaking down problems into smaller, reusable components known as functions or procedures?

- Oa Procedural programming
- b. Imperative programming
- Oc Object-oriented programming
- Od. Functional programming

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The correct option is:

a. Procedural programming.

Procedural programming emphasizes breaking down problems into smaller, reusable components called procedures or functions.

Which one of the following is a passive attack?

- a. Masquerade
- Ob. DoS
- c. Traffic analysis
- Od. Reply



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The correct option is:

c. Traffic analysis.

Traffic analysis is considered a passive attack because it involves monitoring and analyzing data traffic without altering or disrupting the communication.

Which one of the following is not a step in merge sort algorithm?

- a. Combine
- O b. Conquer
- Oc. Divide
- Od. Analyze



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The correct option is:

d. Analyze.

The steps in the merge sort algorithm are typically "Divide," "Conquer," and "Combine." "Analyze" is not one of those steps.

What does the term "algorithm" refer to in the context of computer programming?

- a. A set of rules or instructions for solving a problem
- Ob. A variable that holds a single piece of data
- c. A function that performs a specific task
- Od. A programming language syntax



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The correct option is:

a. A set of rules or instructions for solving a problem.

In computer programming, an algorithm refers to a systematic procedure or set of rules for solving a specific problem.

Which objective of modern operating systems involves protecting the system and its resources from unauthorized access and malicious attacks?

- a. Enhancing system performance
- b. Ensuring security and protection
- Oc. Maximizing hardware utilization
- Od. Providing a user-friendly interface

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The correct option is:

b. Ensuring security and protection.

This objective involves protecting the system and its resources from unauthorized access and malicious attacks.

Which one is correct about RISC computers?

- Oa. RISC are with few numbers of registers when compared to CISC
- Ob. RISC uses extensive addressing capabilities for memory operations
- Oc. RISC use complex and efficient machine instructions when compared to CISC
- Od. RISC is with hardwired control unit with pipelining processing



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The correct option is:

d. RISC is with hardwired control unit with pipelining processing.

RISC (Reduced Instruction Set Computer) architectures typically use a hardwired control unit and support pipelining for efficient instruction execution.

Which of the following is not a characteristic of NoSQL databases?

- Oa. Flexibility in data models
- b. High availability
- Oc. Scalability
- Od. Strict schema enforcement



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The correct option is:

d. Strict schema enforcement.

NoSQL databases are known for their flexibility in data models, high availability, and scalability, but they typically do not enforce a strict schema.

What is the name of a grammar in which all attributes of the grammar symbols are synthesized attributes and se form of inherited attributes?

- a. M-attributed grammar
- b. L-attributed grammar
- c attributed grammar
- d. Stattributed grammar



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The correct option is:

b. L-attributed grammar.

In an L-attributed grammar, all attributes are synthesized attributes, and it allows for some inherited attributes as well.

What is the minimum number of stacks required by a FSA?

- O a. 1
- Ob. 2
- O c. 3
- Od. 0



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The correct option is:

d. 0.

A Finite State Automaton (FSA) does not require any stacks; it operates using a finite number of states without the need for additional memory structures like stacks.

What is the purpose of the switch statement in C++?

- Oa. To declare and define functions
- Ob. To select one of many code blocks to be executed
- Oc. To execute a block of code repeatedly
- Od. To define a loop that repeats until a condition is false



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The correct option is:

b. To select one of many code blocks to be executed.

The switch statement in C++ is used to execute one block of code among many based on the value of a variable.

Which of the following is Uninformed (Blind) Search?

- a. Breadth-first search (BFS)
- b. Hill climbing
- Oc. Heuristic Functions
- d. Greedy search



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The correct option is:

a. Breadth-first search (BFS).

Breadth-first search (BFS) is an uninformed (blind) search algorithm, as it does not use any domain-specific knowledge or heuristics to guide its search.

Which among the following measures how strongly the elements within a module are related?

a. cohesion

b. aggregation

Oc. inheritance

Od. coupling



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The correct option is:

a. cohesion.

Cohesion measures how strongly the elements within a module are related to one another. High cohesion is desirable in software design.

What is the term used to describe the collection of information stored in the database at a particular moment?

O a. foreign key

b. an instance

Oc primary key

Od. schema



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The correct option is:

b. an instance.

In the context of databases, an "instance" refers to the collection of information stored in the database at a particular moment.

Which data structure allows deleting data elements from front and inserting at rear?

Oa. Binary search tree

Ob. Deques

Oc. Stacks

Od. Queues

e



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The correct option is:

d. Queues.

A queue allows deleting data elements from the front and inserting at the rear, following the First In, First Out (FIFO) principle.

Which one of the following commands is used to test reachability of hosts?

Oa. Netstat

Ob. Ping

c. Traceroute

Od. Tcpdump



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The correct option is:

b. Ping.

The ping command is used to test the reachability of hosts on a network by sending ICMP echo request packets and waiting for responses.

Which of the following is true statement?

a. A module having low cohesion and high coupling is said to be functionally independent of other modules.

b. A functionally dependent module has minimal interaction with other modules

OC. A module having high cohesion and low coupling is said to be functionally dependent of other modules

d. Cohesion is a measure of functional strength of a module

Next



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The correct option is:

d. Cohesion is a measure of functional strength of a module.

Cohesion refers to how closely related and focused the responsibilities of a module are, making it a measure of the functional strength of that module.

Which of the following is true statement?

a. A module having low cohesion and high coupling is said to be functionally independent of other modules.

b. A functionally dependent module has minimal interaction with other modules

OC. A module having high cohesion and low coupling is said to be functionally dependent of other modules

d. Cohesion is a measure of functional strength of a module

NextWhich class of grammar is used for syntax analysis?

a. Context free grammars

Ob. Regular grammars

Oc. Non-recursive grammars

Od. Recursive grammars



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For the first question, the correct option is:

d. Cohesion is a measure of functional strength of a module.

For the second question, the correct option is:

a. Context free grammars.

Context-free grammars are commonly used for syntax analysis in programming languages.

Which class of grammar is used for syntax analysis?

a. Context free grammars

Ob. Regular grammars

Oc. Non-recursive grammars

Od. Recursive grammars



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The correct option is:

a. Context free grammars.

Context-free grammars are primarily used for syntax analysis in programming languages.

Brute-force attacks are used most often against which types of access control?

Oa. Biometrics and smart cards

- b. Passwords and Smart Cards
- c. Passwords and Personal Identification Number
- Od. Biometrics and Passwords



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The correct option is:

c. Passwords and Personal Identification Number.

Brute-force attacks are most commonly targeted at passwords and PINs, as these can be systematically guessed by trying various combinations.

One of the following describes the static structure of a system?

- Oa. Sequence diagram
- Ob. Use case diagram
- Oc. Activity diagram
- Od. Class diagram



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The correct option is:

d. Class diagram.

A class diagram describes the static structure of a system by showing the system's classes, their attributes, methods, and the relationships between them.

Which scheduling algorithm ensures that each process gets an equal share of the CPU time?

- a. Round Robin (RR)
- b. First-Come, First-Served (FCFS)

- c. Shortest Job Next (SJN)
- d. Priority Scheduling



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The correct option is:

a. Round Robin (RR).

The Round Robin scheduling algorithm ensures that each process gets an equal share of CPU time by allocating a fixed time slice to each process in a cyclic manner.

The data structure required for breadth first traversal on a graph is:

- Oa. Stack
- b. Tree
- Oc. Queue
- Od. Array



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The correct option is:

c. Queue.

A queue is the data structure required for breadth-first traversal on a graph, as it follows the First In First Out (FIFO) principle, allowing for the exploration of nodes level by level.

In PHP, which function initiates a session?

- O
- a. s_start()
- Ob. session_start()

O c. start()

Od. session_str()



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The correct option is:

b. session_start().

In PHP, the session_start() function is used to initiate a session.

EP

Time left 2:41:35

B-bica / b Which one of the following strin

A grammar has the following productions: Aas

| b | ba

is in the language generated by the grammar?

Ob bcbbbcabbchaa

cacbcbbbbcabe

Od abbocabbcbbbcbbaca



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To determine which string is in the language generated by the grammar with the productions:

- $A \rightarrow aA$
- $A \rightarrow b$
- $A \rightarrow ba$

Let's analyze each string:

1. **bcbbbcabbchaa:**
 - Does not start with 'a' or 'b', so it cannot be generated.
2. **cacbcbbbbcabe:**
 - Does not start with 'a' or 'b', so it cannot be generated.
3. **abbocabbcbcbcbaca:**
 - Does not start with 'a' or 'b', so it cannot be generated.

None of the strings match the productions based on the provided grammar. Thus, none of the options are valid strings in the language generated by the grammar.

If you need further clarification or a different example, feel free to ask!

Which one of the following places we cannot place our java script code?

- Oa. In any tag as an attribute
- Ob. In the <body> tag
- Oc. In external files
- Od. In the <head> tag



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The correct option is:

a. In any tag as an attribute.

JavaScript code cannot be placed as an attribute in any tag. It should be placed in <script> tags within the <head> or <body>, or in external files.

Which one of the following is not a component of the computer system?

- a. The data unit
- b. The input unit
- Oc. The control unit
- Od. The storage unit



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The correct option is:

a. The data unit.

The data unit is not typically considered a separate component of a computer system, while the input unit, control unit, and storage unit are all essential components.

In signal communication, the absolute value of the highest intensity of the signal proportional to the energy it came is referred as

- a. Pernod
- b. Frequency

Attenuation

Od. Peak-amplitude



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The correct option is:

d. Peak-amplitude.

In signal communication, the absolute value of the highest intensity of the signal is referred to as peak amplitude.

What is encapsulation in OOP?

- a. Inheritance
- b. Composition
- c. Data hiding and abstraction
- d. Polymorphism



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The correct option is:

c. Data hiding and abstraction.

Encapsulation in Object-Oriented Programming (OOP) refers to the bundling of data and methods that operate on that data, along with restricting access to some of the object's components, which is primarily about data hiding and abstraction.

Which one of the following is a correct statement?

- a. Turing machine is the least powerful automata
- b. Pushdown automata and FSA have the same power
- Oc. Regular expression is more powerful than FSA
- Od. Deterministic FSA and Nondeterministic FSA are equivalent



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The correct option is:

d. Deterministic FSA and Nondeterministic FSA are equivalent.

Both deterministic finite state automata (DFA) and nondeterministic finite state automata (NFA) recognize the same class of languages (regular languages), meaning they are equivalent in terms of the languages they can recognize.

Which one of the following statements is true?

- Oa. The transport layer in OSI model is connection oriented and connectionless
- b. The transport layer in TCP/IP model is connection oriented only
- Oc. TCP/IP model has seven layers while OSI model has four.
- Od. OSI model provides clear distinction between services, interfaces and protocols while TCP/IP model



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The correct option is:

a. The transport layer in OSI model is connection oriented and connectionless.

The transport layer in the OSI model can support both connection-oriented (e.g., TCP) and connectionless (e.g., UDP) communication.

How does AI contribute to the study of human behavior and cognition?

a. By disregarding human behavior as irrelevant to AI research.

Ob. By relying solely on philosophical theories of consciousness.

Oc. By providing insights through analyzing vast amounts of behavioral data.

Od. By limiting its scope to deterministic algorithms.



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The correct option is:

c. By providing insights through analyzing vast amounts of behavioral data.

AI contributes to the study of human behavior and cognition by analyzing large datasets, allowing researchers to identify patterns and gain insights into human behavior.

Which backup strategy tries to backup only the modified files?

a. Full backup

b. Partial backup

Oc. Full dump

Od. Incremental backup



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The correct option is:

d. Incremental backup.

An incremental backup strategy only backs up the files that have changed since the last backup, making it efficient in terms of time and storage space.

Which of the following is not Software Characteristics?

- Oa. Maintenance is without spare part
- Ob. software is complex
- Oc. Software is manufactured
- Od. Software is intangible



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The correct option is:

a. Maintenance is without spare part.

This statement does not describe a characteristic of software. The other options correctly describe characteristics of software, such as its complexity, manufacturing process, and intangibility.

Which action of the bottom-up parsing moves terminals from input buffer to the stack?

- Oa. Accept
- b. Shift
- Oc. Augment
- Od. Reduce



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The correct option is:

b. Shift.

In bottom-up parsing, the "shift" action moves terminals from the input buffer onto the stack.

Is the process of arranging the elements of a particular data structure in some logical order

Oa. Insertion

Ob. Traversing

Oc. Merging

Od. Sorting



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The correct option is:

d. Sorting.

Sorting is the process of arranging the elements of a data structure in a specific logical order.

What would be the output of the following JavaScript code?

```
<script type="text/javascript">
```

```
x=4+"4";
```

```
document.write(x);
```

```
</script>
```

a. 4

b. 8

c. 44

Od. The code contains an error



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The correct option is:

c. 44.

In the code, `4 + "4"` results in string concatenation, so the output will be "44".

When an input will be accepted by a Turing Machine?

- Oa. If the machine halts in a final state
- b. If the machine enters into an infinite loop
- Oc. If it reaches any state and has no possible move for an input symbol
- d. If the machine consumes all the input symbols in one of the states



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The correct option is:

a. If the machine halts in a final state.

A Turing Machine accepts an input if it halts in a designated final (accepting) state.

What is the regular expression for the set of strings that start with `ab` and end with `bba` over the alphabet set (a, b) ?

- a. `ab(ab)*bba`
- b. `aba"b"bba`
- Oc `ab(a+b)*bba`
- d. `ab(a+b*)bba`



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The correct option is:

**a. ab(ab)bba.*

This regular expression matches strings that start with "ab" and end with "bba," allowing for any number of "ab" repetitions in between.

Which one of the following is false about HTTP protocol?

- Oa. An HTTP message body can be empty
- b. It is a protocol used for communication between a web browser and a web server
- Oc. It is a stateless protocol
- Od. An HTTP message has specified minimum size



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The correct option is:

d. An HTTP message has specified minimum size.

This statement is false; HTTP messages do not have a specified minimum size. An HTTP message body can indeed be empty, and the protocol is stateless.

Which condition in a resource allocation system refers to a situation where a set of processes are waiting for resources held by each other, forming a circular chain?

- a. Hold and wait
- Ob. No preemption
- Oc. Mutual exclusion
- Od. Circular wait



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The correct option is:

d. Circular wait.

This condition refers to a situation where a set of processes are waiting for resources held by each other, forming a circular chain.

What does DOM stand for in HTML?

Oa. Document Oriented Management

Ob. Document OnLoad Model

Oc. Document Object Model

Od. Document Oriented Model



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Poe

The correct option is:

c. Document Object Model.

DOM stands for Document Object Model, which is a programming interface for HTML and XML documents.

Select incorrect statement about Database languages?

Oa. Data-manipulation language (DML) Retrieval of information stored in the database.

Ob. Data-definition language (DDL) to specify the database schema.

Oc. Data-definition languages (DDL) specify Modification of information stored in the database

Od. Data-manipulation language (DML) is a language that enables users to access or manipulate data as organized by the appropriate data model



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The correct option is:

c. Data-definition languages (DDL) specify Modification of information stored in the database.

This statement is incorrect because DDL is used for defining the database schema, not for modifying data. Data Manipulation Language (DML) is used for modifying information stored in the database.

Everything is a/an in HTML DOM?

Oa. Element

Ob. Array

Oc. Node

Od. Attribute



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Poe

The correct option is:

c. Node.

In the HTML DOM, everything is represented as a node. This includes elements, attributes, and text.

An operation performed on the contents of a register is known as

Oa. Instruction code

Ob. Micro-operation

Oc. Registration

Od. Accumulation



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The correct option is:

b. Micro-operation.

An operation performed on the contents of a register is known as a micro-operation.

Which one of the following is not unique for every computer in the network?

Oa. MAC address

Ob. IP-v4 address

Oc. IP-v6 address

Od. Subnet mask



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The correct option is:

d. Subnet mask.

The subnet mask is not unique for every computer in the network; it can be the same for multiple devices on the same subnet. In contrast, MAC addresses, IPv4 addresses, and IPv6 addresses are unique to each device.

In PHP, are predefined variables that are accessible throughout your script.

Oa. Predefined variables

b. Reserved variables

c. Superglobals

Od. Global variables



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The correct option is:

c. Superglobals.

In PHP, superglobals are predefined variables that are accessible throughout your script.

Polynomial addition is implemented using which data structure?

- Oa. Stack
- b. Linked List
- Oc. Queue
- Od. Trees



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The correct option is:

b. Linked List.

Polynomial addition is commonly implemented using linked lists, where each node represents a term of the polynomial.

Which of the following access control services determines what a subject can do?

- a. Accountability
- Ob. Audit
- Oc. Authorization
- Od. Authentication



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The correct option is:

c. Authorization.

Authorization determines what a subject can do in terms of access control services.

Which one of the following is not used to determine the CPU state at the end of the execute cycle?

- Oa. The content of certain status conditions
- b. The content of all processor registers
- Oc. The content of the data bus
- Od. The content of the program counter



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The correct option is:

c. The content of the data bus.

The content of the data bus is not used to determine the CPU state at the end of the execute cycle. The other options are relevant for assessing the CPU state.

Which of the following best describes a database?

- Oa. A collection of data organized in a specific structure
- Ob. A collection of random data
- Oc. A collection of related files
- Od. A collection of unrelated files



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The correct option is:

a. A collection of data organized in a specific structure.

This definition best describes a database, as it emphasizes the organization of data in a structured manner.

Which one of the following property of a graph represents the number of derivation steps needed to generate a valid string?

- a. Degree of the vertex
- Ob. Parent vertex
- Oc Root of the graph
- d. Path of a vertex from the root



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The correct option is:

d. Path of a vertex from the root.

The path of a vertex from the root represents the number of derivation steps needed to generate a valid string in a graph.

Which function of a contemporary operating system focuses on providing users with easy access to applica resources?

- a. Device management
- b. File management
- c. Process management
- Od. User interface management



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The correct option is:

d. User interface management.

User interface management focuses on providing users with easy access to application resources.

Which SQL command is used to retrieve data from a database?

- O a. UPDATE
- Ob. INSERT
- Oc. SELECT
- Od. DELETE



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The correct option is:

c. SELECT.

The SELECT command is used to retrieve data from a database.

Which one of the following is not an attack on passwords?

- a. Brute-force Attack
- Ob. Trojan Login
- Oc. Logic Bomb
- Od. Eavesdropping



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The correct option is:

c. Logic Bomb.

A logic bomb is not specifically an attack on passwords; it is a piece of malicious code designed to trigger under specific conditions. The other options directly relate to password attacks.

One of the following is an example of Deduction Reasoning?

- a. The grass has been wet every time it has rained. Thus, when it rains, the grass gets wet.

- b. When it rains, the grass gets wet. It rains. Thus the grass is wet.
- c. When it rains, the grass gets wet. The grass is wet. It rains.
- Od. When it rains, the grass gets wet. The grass is wet, it must have rained



[Assistant](#)

Poe

The correct option is:

b. When it rains, the grass gets wet. It rains. Thus the grass is wet.

This is an example of deductive reasoning, where a general rule is applied to a specific case to reach a conclusion.

What is the command used to change permissions of a file for different users?

- Oa. Permission
- b. Perm
- Oc. Modify
- Od. Chmod



[Assistant](#)

Poe

The correct option is:

d. Chmod.

The chmod command is used to change permissions of a file for different users in Unix and Linux systems.

One of the following is not Properties of an algorithm?

- Oa. Finite
- b. Input and Output

Oc. Correct

Od. Ambiguity



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Poe

The correct option is:

d. Ambiguity.

Ambiguity is not a property of an algorithm; in fact, algorithms should be unambiguous. The other options (finite, input and output, correct) are properties of an algorithm.

What are the factors to be considered when planning a software development effort?

a. people, problem, productivity, performance

b. people, problem, product, portability

Oc. people, problem, product, process

d. performance, problem, product, planning



[Assistant](#)

Poe

The correct option is:

c. people, problem, product, process.

These factors are essential to consider when planning a software development effort.

What is the term used to describe a blueprint for creating objects in OOP?

Oa. Method

Ob. Class

Oc. Instance

Od. Object



[Assistant](#)

Poe

The correct option is:

b. Class.

In Object-Oriented Programming (OOP), a class is a blueprint for creating objects.

Which OOP principle emphasizes the separation of concerns by dividing a program into smaller, manageable parts?

Oa Inheritance

b. Modularity

c. Abstraction

Od Encapsulation



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Poe

The correct option is:

b. Modularity.

Modularity emphasizes the separation of concerns by dividing a program into smaller, manageable parts.

Which data structure is used to represent the grammatical structure of the source program constructs?"

a. Stack

Ob. Queue

Oc Tree

O d. 2d-array



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Poe

The correct option is:

c. Tree.

A tree data structure is commonly used to represent the grammatical structure of source program constructs, particularly in compilers and interpreters.

What is the main advantage of using references (&) in C++ compared to pointers?

- a. References can be dynamically allocated
- Ob. References are more memory-efficient
- Oc. References cannot be null
- Od. References can access arbitrary memory locations



[Assistant](#)

Poe

The correct option is:

c. References cannot be null.

This is a main advantage of using references in C++ compared to pointers, as references must always refer to a valid object and cannot be null.

Which one of the following class of running time functions is the best?

- Oa. Exponential
- b. Logarithmic
- Oc. Linear
- Od. Polynomial



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Poe

The correct option is:

b. Logarithmic.

Logarithmic time complexity is the best among the options listed, as it grows the slowest relative to the size of the input.

Which one of the following tags is used to represent paragraphs?

O a. < p >

Ob. < ph >

Oc. < par >

Od. < pg >



[Assistant](#)

Poe

The correct option is:

a. <p>

The <p> tag is used to represent paragraphs in HTML.

Which one of the following is the lowest level in computer architecture?

Oa. Hardware

b. Machine language

c. High-level language

Od. Assembly language



[Assistant](#)

Poe

The correct option is:

a. Hardware.

Hardware is the lowest level in computer architecture, as it refers to the physical components of a computer system.

Which of the following is a correct statement?

- a. System threat is a state which exposes the system for possible attacks
- b. System attack is set of activities that may expose the system for possible dangers
- Oc. Vulnerability is a flaw in the system's design that may be exploited by attackers
- Od. System protection is a process of disconnecting the system from any communication



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Poe

The correct option is:

c. Vulnerability is a flaw in the system's design that may be exploited by attackers.

This statement accurately describes what a vulnerability is in the context of computer security.

Which one of the following is not a principle of system administration?

- Oa. Request-based
- Ob. Communication
- c. Automation
- Od. Simplicity



[Assistant](#)

Poe

The correct option is:

a. Request-based.

While communication, automation, and simplicity are principles of effective system administration, "request-based" is not recognized as a core principle.

What is the name given to built-in functions in assembly code?

- O a. Cache
- Ob. Func
- Oc. Mnemonics
- Od. Register



[Assistant](#)

Poe

The correct option is:

c. Mnemonics.

Mnemonics are the symbolic names given to machine-level instructions in assembly language, making them easier for programmers to read and write.

Which one of the following is a correct statement?

- a. Code optimization can only be done before the actual code is generated
- b. Code optimization can only be done after the actual code is generated
- Oc. Code optimization can be done on the intermediate code
- Od. Code optimization cannot be done before the actual code is generated
- e



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Poe

The correct option is:

c. Code optimization can be done on the intermediate code.

Code optimization can occur at various stages, including on intermediate representations of the code, not just before or after code generation.

What is the purpose of a loop in computer programming?

- Oa. To declare variables
- Ob. To create user interfaces
- Oc. To define conditional statements
- Od. To execute a block of code repeatedly



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Poe

The correct option is:

d. To execute a block of code repeatedly.

Loops are used in programming to repeatedly execute a section of code based on a specified condition.

What is the primary purpose of a variable in computer programming?

- Oa. To define functions
- Ob. To store and manipulate data
- Oc. To create graphical user interfaces (GUIs)
- Od. To execute conditional statements



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Poe

The correct option is:

b. To store and manipulate data.

Variables are used in programming to hold data that can be modified and manipulated throughout the program.

The data structure used in the standard implementation of Depth First Search is

- a. Stack
- b. Linked List
- c. Queue
- Od. Array



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Poe

The correct option is:

a. Stack.

Depth First Search (DFS) typically uses a stack data structure for its implementation, either explicitly or through recursive function calls.

Which cable type is the best for transmission of data?

- Oa. Coaxial
- b. Fiber Optic
- Oc. RJ-45
- Od. Twisted pair



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Poe

The correct option is:

b. Fiber Optic.

Fiber optic cables are the best for data transmission as they offer higher bandwidth, faster speeds, and greater distance capabilities compared to other cable types.

The set of rules that govern all aspect of data communication between computers on a network are referred as

Oa. Language

b. Syntax

c. Access methods

Od. Protocol



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Poe

The correct option is:

d. Protocol.

Protocols are sets of rules that govern data communication between computers on a network, ensuring proper data exchange and communication.

Which type of database replication offers the highest level of data consistency but may introduce higher later distributed systems?

a. Multi-master replication

b. Asynchronous replication

OcSynchronous replication

d. Semi-synchronous replication

Next



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Poe

The correct option is:

c. Synchronous replication.

Synchronous replication offers the highest level of data consistency because data is written to all replicas at the same time. However, it can introduce higher latency in distributed systems due to the need for all replicas to acknowledge the write before proceeding.

is a special-purpose program or command line interpreter that read commands typed by a user and execute programs in response to entered commands.

- Oa. Kernel
- b. Terminal
- Oc. Process
- Od. Shell



[Assistant](#)

Poe

The correct option is:

d. Shell.

A shell is a special-purpose program or command line interpreter that reads commands typed by a user and executes programs in response to those commands.

Which SQL command is used to delete a table from a database?

- Oa. REMOVE TABLE
- Ob. DROP TABLE
- Oc. ERASE TABLE
- Od. DELETE TABLE



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Poe

The correct option is:

b. DROP TABLE.

The DROP TABLE command is used to delete a table from a database.

Which way to define Scope of Software Project?

- a. Define Error and Functional dependence of the project.
- b. Define non- Deliverables and, Non Functionality.
- Oc. Define Deliverables, Functionality, Data and, Technical Structure.
- d. Complexity and risk of the project



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Poe

The correct option is:

c. Define Deliverables, Functionality, Data and, Technical Structure.

Defining the scope of a software project involves outlining the deliverables, functionality, data requirements, and technical structure to ensure clarity and direction throughout the project.

would be more suitable to store items in a shopping cart to be available when the user revisits the site in a couple of days.

- a. Cache
- b. Cookies
- c. Basket
- Od. Session

Next



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Poe

The correct option is:

b. Cookies.

Cookies are more suitable for storing items in a shopping cart, as they can persist data across sessions, allowing items to remain available when the user revisits the site later.

is an operation of in which each letter of a plaintext changes its position but retains its identity in cryptographic algorithms.

- a. Transposition
- b. Substitution
- c. Block cipher
- d. Mono-alphabetic



[Assistant](#)

Poe

The correct option is:

a. Transposition.

Transposition is an operation in which each letter of a plaintext changes its position while retaining its identity in cryptographic algorithms.

In asymmetric cryptography, the message is encrypted using

- a. Sender's public key
- b. Receiver's public key
- c. Receiver's private key
- d. Sender's private key



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Poe

The correct option is:

b. Receiver's public key.

In asymmetric cryptography, the message is encrypted using the receiver's public key, ensuring that only the receiver can decrypt it with their private key.

What does ACID stand for in database transactions?

Oa. Atomicity, Consistency, Integrity, Durability

b. All Columns Indexed and Defined

Oc. Automated Control of Inconsistent Data

Od. Advanced Constraints for Improved Data



[Assistant](#)

Poe

The correct option is:

a. Atomicity, Consistency, Integrity, Durability.

ACID stands for Atomicity, Consistency, Isolation, and Durability, which are the key properties that ensure reliable processing of database transactions.

One of the following Key ideas wrongly matched in object-oriented?

Oa. Method an action performed by an object.

b. Class-does hold any values of the object's attributes.

Oc. Object- usually a person, place or thing.

Od. Attribute-description of objects in a class.



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Poe

The correct option is:

b. Class - does hold any values of the object's attributes.

This statement is misleading because a class defines the blueprint for objects but does not hold values itself; the values are held by instances (objects) of the class.

One of the following describes the static structure of a system?

- Oa. Sequence diagram
- b. Class diagram
- Oc. Use case diagram
- d. Activity diagram



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Poe

The correct option is:

b. Class diagram.

A class diagram describes the static structure of a system by showing the classes, their attributes, methods, and the relationships between them.

Is the process of arranging the elements of a particular data structure in some logical order?

- O a. Insertion
- Ob. Merging
- c. Traversing
- d. Sorting



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Poe

The correct option is:

d. Sorting.

Sorting is the process of arranging the elements of a particular data structure in some logical order.

Which ACID property ensures that a transaction either completes in its entirety or has no effect at all?

- a. Durability
- b. Consistency
- Oc. Isolation
- Od. Atomicity



[Assistant](#)

Poe

The correct option is:

d. Atomicity.

The Atomicity property ensures that a transaction either completes in its entirety or has no effect at all, meaning it is treated as a single, indivisible unit.

In signal communication, the absolute value of the highest intensity of the signal proportional to the energy it carries is referred as

- a. Peak-amplitude
- b. Period
- Oc. Frequency
- d. Attenuation



[Assistant](#)

Poe

The correct option is:

a. Peak-amplitude.

Peak amplitude refers to the absolute value of the highest intensity of a signal, which is proportional to the energy it carries.

Which of the following is a correct statement?

- Oa. System protection is a process of disconnecting the system from any communication
- Ob. Vulnerability is a flaw in the system's design that may be exploited by attackers
- c. System threat is a state which exposes the system for possible attacks
- Od. System attack is set of activities that may expose the system for possible dangers



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Poe

The correct option is:

Ob. Vulnerability is a flaw in the system's design that may be exploited by attackers.

This statement accurately describes what a vulnerability is in the context of system security.

What is the purpose of the switch statement in C++?

- Oa. To select one of many code blocks to be executed
- b. To declare and define functions
- Oc. To execute a block of code repeatedly
- Od. To define a loop that repeats until a condition is false



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Poe

The correct option is:

Oa. To select one of many code blocks to be executed.

The switch statement in C++ is used to select one of many code blocks to be executed based on the value of a variable.

One of the following is not the main advantage of multiprogramming?

Oa. Copying one's programs or data; using system resources (CPU, memory, disk space, peripheral) without proper accounting.

Ob. Attempts to increase CPU utilization by always having something for the CPU to execute

c. Makes efficient use of the CPU by overlapping the demands for the CPU and its I/O devices from various users

d. The CPU switches from program to program, running each for tens or hundreds of milliseconds. This provides economical interactive use of a system

Next



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Poe

The correct option is:

Oa. Copying one's programs or data; using system resources (CPU, memory, disk space, peripheral) without proper accounting.

This statement does not represent an advantage of multiprogramming; rather, it suggests a misuse of system resources.

You are the administrator of an active directory domain. A user complains to you that he is unable to change his password. No other users have this issue. What is the most likely cause of the problem?

a. He is not a member of the domain

b. He is a member of the Administrators group

c. Insufficient login credentials

Od. The property User cannot change password has been enabled when it was created



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Poe

The correct option is:

Od. The property User cannot change password has been enabled when it was created.

This setting would prevent the user from changing their password, which aligns with the complaint.

What is a foreign key in a relational database?

Oa. A key used for accessing external data sources

Ob. A key used for encryption purposes

Oc. A key used for indexing primary keys

Od. A field in one table that refers to the primary key in another table



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Poe

The correct option is:

Od. A field in one table that refers to the primary key in another table.

A foreign key establishes a relationship between two tables by linking a field in one table to the primary key of another table.

In a healthcare database system, which concept is crucial for ensuring patient data privacy and security?

a. Data Replication

b. Data Mining

O Data Encryption

Od Data Warehousing



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Poe

The correct option is:

O. Data Encryption.

Data encryption is crucial for ensuring patient data privacy and security in a healthcare database system, as it protects sensitive information from unauthorized access.

In knowledge Representation (KR) how we do represent "how to drive a car"?

- a. Information Knowledge
- b. Transition knowledge
- c. Procedural knowledge
- d. Declarative knowledge



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Poe

The correct option is:

c. Procedural knowledge.

Procedural knowledge represents the "how-to" aspect of tasks, such as driving a car, as it involves the processes and procedures required to perform actions.

How does AI contribute to the study of human behavior and cognition?

- Oa. By relying solely on philosophical theories of consciousness.
- Ob. By limiting its scope to deterministic algorithms.
- c. By disregarding human behavior as irrelevant to AI research.
- Od. By providing insights through analyzing vast amounts of behavioral data.



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Poe

The correct option is:

Od. By providing insights through analyzing vast amounts of behavioral data.

AI contributes to the study of human behavior and cognition by analyzing large datasets to identify patterns and insights related to human actions and thought processes.

When an input will be accepted by a Turing Machine?

- a. If the machine consumes all the input symbols in one of the states
- b. If the machine halts in a final state
- c. If the machine enters into an infinite loop
- Od. If it reaches any state and has no possible move for an input symbol



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Poe

The correct option is:

b. If the machine halts in a final state.

A Turing Machine accepts an input when it reaches a final (or accepting) state after processing the input.

Which class of grammar is used for syntax analysis?

- Oa. Regular grammars
- Ob. Non-recursive grammars
- Oc. Recursive grammars
- Od. Context free grammars



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Poe

The correct option is:

Od. Context free grammars.

Context-free grammars are commonly used in syntax analysis for programming languages, as they can effectively describe the structure of expressions and statements.

Which function of a contemporary operating system focuses on providing users with easy access to applications and resources?

User interface management

b. File management

Device management

d. Process management

Next



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Poe

The correct option is:

a. User interface management.

User interface management focuses on providing users with easy access to applications and resources, enabling them to interact with the operating system effectively.

Which of the following is not a characteristic of NoSQL databases?

a. Strict schema enforcement

b. High availability

c. Scalability

Od. Flexibility in data models



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Poe

The correct option is:

a. Strict schema enforcement.

NoSQL databases typically do not enforce a strict schema, allowing for more flexibility in data models.

One of the following Key ideas wrongly matched in object-oriented?

O

a. Class - does hold any values of the object's attributes.

Ob. Attribute- description of objects in a class.

Oc. Object - usually a person, place or thing.

d. Method an action performed by an object.



[Assistant](#)

Poe

The correct option is:

a. Class - does hold any values of the object's attributes.

This statement is misleading because a class itself does not hold values; it defines the structure and behavior of objects, while the actual values are held by instances (objects) of the class.

The data structure required for breadth first traversal on a graph is:

O a. Queue

Ob. Tree

stion

c. Stack

Od. Array



[Assistant](#)

Poe

The correct option is:

a. Queue.

Breadth-first traversal on a graph uses a queue to keep track of the nodes to be explored next.

What is the main advantage of using references (&) in C++ compared to pointers?

- a. References are more memory-efficient
- Ob. References can be dynamically allocated
- Oc. References cannot be null
- Od. References can access arbitrary memory locations



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Poe

The correct option is:

c. References cannot be null.

One of the main advantages of using references in C++ is that they cannot be null, which adds a level of safety compared to pointers, which can point to null or arbitrary memory locations.

Which action of the bottom-up parsing moves terminals from input buffer to the stack?

- Oa. Accept
- Ob. Reduce
- Oc. Augment
- Od. Shift



[Assistant](#)

Poe

The correct option is:

d. Shift.

In bottom-up parsing, the "shift" action moves terminals from the input buffer onto the stack.

Which one is correct about RISC computers?

- a. RISC are with few numbers of registers when compared to CISC

- b. RISC is with hardwired control unit with pipelining processing
- o c. RISC uses extensive addressing capabilities for memory operations
- Od. RISC use complex and efficient machine instructions when compared to CISC



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Poe

The correct option is:

b. RISC is with hardwired control unit with pipelining processing.

RISC (Reduced Instruction Set Computer) architectures typically feature a hardwired control unit and are designed to support pipelining, which enhances instruction throughput.

Which one of the following is a correct statement?

- Oa. Pushdown automata and FSA have the same power
- Ob. Turing machine is the least powerful automata
- Oc. Deterministic FSA and Nondeterministic FSA are equivalent
- Od. Regular expression is more powerful than FSA



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Poe

The correct option is:

c. Deterministic FSA and Nondeterministic FSA are equivalent.

Both deterministic finite automata (DFA) and nondeterministic finite automata (NFA) recognize the same class of languages (regular languages) and can be converted into each other.

If a problem can be broken into sub-problems that are reused several times, the problem property.

- a. Greedy
- b. Optimal substructure

Oc. Memoization

Od. Overlapping sub-problems



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Poe

The correct option is:

d. Overlapping sub-problems.

This property describes problems that can be divided into sub-problems which are reused multiple times, making them suitable for techniques like dynamic programming.

What is the name of a grammar in which all attributes of the grammar symbols are synthesized attribute form of inherited attributes?

- a. S-attributed grammar
- b. M-attributed grammar
- L-attributed grammar
- Od. I-attributed grammar

Ne



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Poe

The correct option is:

a. S-attributed grammar.

In an S-attributed grammar, all attributes are synthesized attributes, meaning they are computed from the attributes of the children nodes in the parse tree.

Which one of the following is false about HTTP protocol?

- a. An HTTP message body can be empty

b. It is a stateless protocol

Oc. An HTTP message has specified minimum size

Od. It is a protocol used for communication between a web browser and a web server



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Poe

The correct option is:

c. An HTTP message has specified minimum size.

This statement is false because HTTP messages do not have a specified minimum size; they can be empty or very small, depending on the context.

What is the term used to describe the collection of information stored in the database at a particular moment?

Oa primary key

Ob. schema

C. an instance

Od. foreign key

Next



[Assistant](#)

Poe

The correct option is:

c. an instance.

An instance refers to the collection of information stored in the database at a particular moment, representing the current state of the data.

An operation performed on the contents of a register is known as

- Oa. Instruction code
- Ob. Registration
- Oc. Micro-operation
- Od. Accumulation



[Assistant](#)

Poe

The correct option is:

c. Micro-operation.

A micro-operation is an operation that is performed on the contents of a register.

Which backup strategy tries to backup only the modified files?

- a. Partial backup
- Ob. Full dump
- c. Incremental backup
- Od. Full backup

Clear my choice

n

age



[Assistant](#)

Poe

The correct option is:

c. Incremental backup.

An incremental backup strategy backs up only the files that have been modified since the last backup, whether that was a full backup or another incremental backup.

Which way to define Scope of Software Project?

Oa. Define Deliverables, Functionality, Data and, Technical Structure.

Ob. Define Error and Functional dependence of the project.

Oc. Define non- Deliverables and, Non Functionality.

Od. Complexity and risk of the project



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Poe

The correct option is:

a. Define Deliverables, Functionality, Data and, Technical Structure.

This approach effectively outlines the scope of a software project by specifying what will be delivered, the required functionalities, the data involved, and the technical structure.

Which among the following measures how strongly the elements within a module are related?

O a. inheritance

b. aggregation

Oc. coupling

Od. cohesion



[Assistant](#)

Poe

The correct option is:

d. cohesion.

Cohesion measures how strongly the elements within a module are related to each other. Higher cohesion indicates that the elements are closely related in terms of functionality.

Polynomial addition is implemented using which data structure?

- a. Stack
 - b. Linked List
 - Oc. Queue
 - Od. Trees
- n
- ge



[Assistant](#)

Poe

The correct option is:

b. Linked List.

Polynomial addition is typically implemented using linked lists, as they can efficiently represent the terms of a polynomial and allow for easy manipulation of the terms during addition.

Which one of the following is a passive attack?

- ☐ a. Reply
- ☐ Ob. DoS
- ☐ c. Traffic analysis
- ☐ d. Masquerade



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Poe

The correct option is:

c. Traffic analysis.

Traffic analysis is considered a passive attack because it involves monitoring and analyzing the traffic patterns without altering the data being transmitted.

Which one of the following property of a graph represents the number of derivation steps needed to generate a v string?

- a. Path of a vertex from the root
- b. Degree of the vertex
- c. Parent vertex
- d. Root of the graph

Next



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Poe

The correct option is:

a. Path of a vertex from the root.

The path of a vertex from the root in a graph represents the number of derivation steps needed to generate a string, as it reflects the sequence of steps taken to reach that vertex from the root.

Which one of the following is not used to determine the CPU state at the end of the execute cycle?

- a. The content of the data bus
- b. The content of certain status conditions
- c. The content of all processor registers
- d. The content of the program counter



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Poe

The correct option is:

a. The content of the data bus.

The content of the data bus is not used to determine the CPU state at the end of the execute cycle. The CPU state is typically determined by the contents of the processor registers, status conditions, and the program counter.

Which one of the following is not a principle of system administration?

- Oa. Request-based
- Ob. Automation
- c. Communication
- Od. Simplicity



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Poe

The correct option is:

a. Request-based.

"Request-based" is not typically considered a principle of system administration. The principles usually focus on automation, communication, and simplicity to enhance efficiency and effectiveness in managing systems.