CUET UG Computer Science Sample Paper-1

Duration: 1 Hour **Maximum Marks: 250**

Instructions

- This paper contains a total of 50 Multiple Choice Questions.
- Each correct answer carries **+5 marks**.
- Each incorrect answer carries **-1 mark**.
- No negative marking for unattempted questions.

Q1. Which SQL query correctly returns the number of characters in the value stored in the column name for every row of table Student?

(A) SELECT LENGTH(name) FROM Student;

(B) SELECT COUNT(name) FROM Student;

(C) SELECT SIZE(name) FROM Student;

(D) SELECT CHAR(name) FROM Student;

Q2. In MySQL, what will be the output of SELECT ROUND(45.678, 1); ?

(A) 45.6

(B) 45.7

(C) 46.0

(D) 45.68

Q3. Which SQL function is most appropriate to extract the year from a date value stored as 2025-07-18?

(A) MONTH()

(B) YEAR()

(C) DATE()

(D) DAYNAME()

Q4. What is returned by SELECT UPPER('CuetCs'); ?

(A) cuetcs

(B) CUETCS

(C) Cuetcs

(D) Error

Q5. Which function should be used to remove extra spaces from both ends of a string in SQL?

(A) LTRIM()

(B) RTRIM()

(C) TRIM()

(D) SPACE()

Q6. For a table Marks(score), which query returns the highest score?

(A) SELECT MAX(score) FROM Marks;

(B) SELECT HIGH(score) FROM Marks;

(C) SELECT TOP(score) FROM Marks;

(D) SELECT UPPER(score) FROM Marks;

Q7. Which SQL expression joins first_name and last_name into one string in MySQL?

(A) JOIN(first_name,last_name)

(B) CONCAT(first_name, last_name)

(C) MERGE(first_name,last_name)

(D) ADDSTR(first_name,last_name)

Q8. What is the purpose of the GROUP BY clause with aggregate functions?

(A) To arrange rows alphabetically

(B) To divide rows into groups before applying aggregate functions

(C) To delete duplicate rows permanently

(D) To create a new table

Q9. In a relational table, a candidate key is best described as:

(A) Any column that stores text data

(B) A minimal set of attributes that can uniquely identify a tuple

(C) A key that must always refer to another table

(D) A column that allows duplicate values

Q10. Which relational algebra operation selects rows that satisfy a condition?

(A) Projection

(B) Selection

(C) Cartesian Product

(D) Union

Q11. Which relational algebra operation chooses specific columns from a relation?

(A) Selection

(B) Projection

(C) Difference

(D) Product

Q12. A foreign key in table Enrolment usually refers to:

(A) A non-existing table

(B) The primary key of another related table

(C) Only a numeric column in the same row

(D) A duplicate candidate key in the same table

Q13. Which network topology uses a central device to connect all nodes?

(A) Bus

(B) Ring

(C) Star

(D) Mesh

Q14. Which device forwards packets between different networks using IP addresses?

(A) Repeater

(B) Router

(C) Hub

(D) RJ45 connector

Q15. Which statement correctly differentiates MAC address and IP address?

(A) MAC is logical and IP is physical

(B) MAC is physical hardware address and IP is logical network address

(C) Both are assigned only by websites

(D) Both change after every packet

Q16. Which data structure follows LIFO principle?

(A) Queue

(B) Stack

(C) Array

(D) Linked list only

Q17. If stack operations are PUSH 5, PUSH 8, POP, PUSH 2, POP, what is the final element popped?

(A) 5

(B) 8

(C) 2

(D) Stack underflow

Q18. The postfix expression 6 2 3 + * evaluates to:

(A) 30

(B) 15

(C) 11

(D) 36

Q19. Which infix expression corresponds to postfix expression A B + C * ?

(A) A + B * C

(B) (A + B) * C

(C) A * B + C

(D) A + (B + C)

Q20. Which data structure follows FIFO principle?

(A) Stack

(B) Queue

(C) Tree

(D) Graph

Q21. In a simple queue, deletion takes place from:

(A) Rear

(B) Front

(C) Middle

(D) Any random position

Q22. In a linked list implementation, each node generally contains:

(A) Only index number

(B) Data and link/address of next node

(C) Only array size

(D) Only sorting key

Q23. Which condition usually indicates stack underflow?

(A) Pushing into a full stack

(B) Popping from an empty stack

(C) Queue becoming full

(D) Linked list having one node

Q24. Which symbol normally has the highest precedence among +, -, *, /, and $\wedge$ in expression conversion?

(A) +

(B) *

(C) /

(D) $\wedge$

Q25. Which operation inserts an element into a queue?

(A) PUSH

(B) POP

(C) ENQUEUE

(D) PEEK only

Q26. Which application commonly uses a stack?

(A) Printer job scheduling

(B) Function call management

(C) Round-robin CPU scheduling

(D) Breadth-first search only

Q27. Binary search can be correctly applied only when the data is:

(A) Randomly arranged

(B) Sorted

(C) Stored as text only

(D) Duplicated only

Q28. In the worst case, linear search in a list of n elements performs:

(A) 1 comparison

(B) log n comparisons

(C) n comparisons

(D) n squared comparisons

Q29. Which sorting method repeatedly compares adjacent elements and swaps them if they are in wrong order?

(A) Selection sort

(B) Bubble sort

(C) Insertion sort

(D) Binary sort

Q30. Which sorting algorithm repeatedly selects the minimum element from the unsorted part?

(A) Bubble sort

(B) Selection sort

(C) Insertion sort

(D) Merge only

Q31. Insertion sort is generally efficient when the list is:

(A) Already nearly sorted

(B) Extremely large and random only

(C) Stored in a database only

(D) Unsearchable

Q32. What is the average-case time complexity of linear search?

(A) O(1)

(B) O(log n)

(C) O(n)

(D) O(n log n)

Q33. For binary search on 32 sorted elements, the maximum number of comparisons is closest to:

(A) 2

(B) 5

(C) 16

(D) 32

Q34. After the first pass of bubble sort in ascending order, which element is guaranteed to be at the end?

(A) Smallest

(B) Median

(C) Largest

(D) First input element

Q35. Which search technique checks elements sequentially from the beginning until the target is found?

(A) Binary search

(B) Linear search

(C) Hashing only

(D) Selection search

Q36. Which Python block is used to handle exceptions?

(A) for

(B) try-except

(C) def

(D) import

Q37. Which exception is raised when division by zero is attempted in Python?

(A) ValueError

(B) IndexError

(C) ZeroDivisionError

(D) TypeError only

Q38. What is the role of finally in Python exception handling?

(A) It runs only when there is no error

(B) It runs whether an exception occurs or not

(C) It stops program execution always

(D) It creates a file automatically

Q39. Which mode opens a text file for reading in Python?

(A) w

(B) r

(C) a

(D) x+ only

Q40. Which method reads all lines of a text file into a list?

(A) read()

(B) readline()

(C) readlines()

(D) write()

Q41. Which module is commonly used for binary file handling of Python objects?

(A) math

(B) pickle

(C) random

(D) csv only

Q42. Which statement correctly writes a string to an opened text file object f?

(A) f.read(”Hello”)

(B) f.write(”Hello”)

(C) write.f(”Hello”)

(D) print.read(”Hello”)

Q43. What does seek(0) generally do for an opened file?

(A) Deletes the file

(B) Moves file pointer to the beginning

(C) Closes the file

(D) Converts file to binary

Q44. Which protocol is used for transferring web pages over the web?

(A) FTP

(B) HTTP

(C) SMTP

(D) POP3

Q45. Which protocol is commonly used to transfer files between client and server?

(A) FTP

(B) HTTP only

(C) DNS

(D) ARP

Q46. Which switching technique establishes a dedicated path before data transmission?

(A) Packet switching

(B) Circuit switching

(C) Message switching

(D) Broadcast switching

Q47. Which communication mode allows data flow in both directions but not at the same time?

(A) Simplex
(B) Half-duplex
(C) Full-duplex
(D) Broadcast only

Q48. Which of the following is malware that can replicate itself by attaching to programs?

(A) Firewall
(B) Virus
(C) Cookie
(D) Hub

Q49. Which security tool filters incoming and outgoing network traffic based on rules?

(A) Firewall
(B) Repeater
(C) Modem
(D) Switch only

Q50. HTTPS is more secure than HTTP mainly because it uses:

(A) Larger monitor size
(B) Encryption through SSL/TLS
(C) Only text pages
(D) No domain names

Detailed Solutions

Q1.

Solution

Concept: SQL Functions – SQL string function LENGTH returns the character count of each string value.

Solution:

1. Identify the demand of the question: it is testing sql functions in a CUET-style objective format.
2. Apply the relevant rule: SQL string function LENGTH returns the character count of each string value.
3. Eliminate the distractors: options B, C, D do not satisfy the exact concept, command behavior, or definition required in the question.
4. Verify the selected option with the standard Computer Science principle; option A gives the only technically correct statement among the four choices.

Final Answer:

(A) SELECT LENGTH(name) FROM Student;

Answer: (A)

Q2.

Solution

Concept: SQL Functions – ROUND(number, d) rounds the number to d decimal places, so 45.678 becomes 45.7.

Solution:

1. Identify the demand of the question: it is testing sql functions in a CUET-style objective format.
2. Apply the relevant rule: ROUND(number, d) rounds the number to d decimal places, so 45.678 becomes 45.7.
3. Eliminate the distractors: options A, C, D do not satisfy the exact concept, command behavior, or definition required in the question.
4. Verify the selected option with the standard Computer Science principle; option B gives the only technically correct statement among the four choices.

Final Answer:

(B) 45.7

Answer: (B)

Q3.

Solution

Concept: SQL Functions – YEAR() extracts the year component from a valid date expression.

Solution:

1. Identify the demand of the question: it is testing sql functions in a CUET-style objective format.
2. Apply the relevant rule: YEAR() extracts the year component from a valid date expression.
3. Eliminate the distractors: options A, C, D do not satisfy the exact concept, command behavior, or definition required in the question.
4. Verify the selected option with the standard Computer Science principle; option B gives the only technically correct statement among the four choices.

Final Answer:

(B) YEAR()

Answer: (B)

Q4.

Solution

Concept: SQL Functions – UPPER converts every alphabetic character in the string to uppercase.

Solution:

1. Identify the demand of the question: it is testing sql functions in a CUET-style objective format.
2. Apply the relevant rule: UPPER converts every alphabetic character in the string to uppercase.
3. Eliminate the distractors: options A, C, D do not satisfy the exact concept, command behavior, or definition required in the question.
4. Verify the selected option with the standard Computer Science principle; option B gives the only technically correct statement among the four choices.

Final Answer:

(B) CUETCS

Answer: (B)

Q5.

Solution

Concept: SQL Functions – TRIM removes leading and trailing spaces together.

Solution:

1. Identify the demand of the question: it is testing sql functions in a CUET-style objective format.
2. Apply the relevant rule: TRIM removes leading and trailing spaces together.
3. Eliminate the distractors: options A, B, D do not satisfy the exact concept, command behavior, or definition required in the question.
4. Verify the selected option with the standard Computer Science principle; option C gives the only technically correct statement among the four choices.

Final Answer:

(C) TRIM()

Answer: (C)

Q6.

Solution

Concept: SQL Functions – MAX is the aggregate function used to return the largest value in a column.

Solution:

1. Identify the demand of the question: it is testing sql functions in a CUET-style objective format.
2. Apply the relevant rule: MAX is the aggregate function used to return the largest value in a column.
3. Eliminate the distractors: options B, C, D do not satisfy the exact concept, command behavior, or definition required in the question.
4. Verify the selected option with the standard Computer Science principle; option A gives the only technically correct statement among the four choices.

Final Answer:

(A) SELECT MAX(score) FROM Marks;

Answer: (A)

Q7.

Solution

Concept: SQL Functions – CONCAT combines two or more strings into a single string.

Solution:

1. Identify the demand of the question: it is testing sql functions in a CUET-style objective format.
2. Apply the relevant rule: CONCAT combines two or more strings into a single string.
3. Eliminate the distractors: options A, C, D do not satisfy the exact concept, command behavior, or definition required in the question.
4. Verify the selected option with the standard Computer Science principle; option B gives the only technically correct statement among the four choices.

Final Answer:

(B) CONCAT(first_name, last_name)

Answer: (B)

Q8.

Solution

Concept: SQL Functions – GROUP BY forms groups of rows so aggregate functions can compute one result per group.

Solution:

1. Identify the demand of the question: it is testing sql functions in a CUET-style objective format.
2. Apply the relevant rule: GROUP BY forms groups of rows so aggregate functions can compute one result per group.
3. Eliminate the distractors: options A, C, D do not satisfy the exact concept, command behavior, or definition required in the question.
4. Verify the selected option with the standard Computer Science principle; option B gives the only technically correct statement among the four choices.

Final Answer:

(B) To divide rows into groups before applying aggregate functions

Answer: (B)

Q9.

Solution

Concept: Database Concepts – A candidate key uniquely identifies each tuple and has no unnecessary attribute.

Solution:

1. Identify the demand of the question: it is testing database concepts in a CUET-style objective format.
2. Apply the relevant rule: A candidate key uniquely identifies each tuple and has no unnecessary attribute.
3. Eliminate the distractors: options A, C, D do not satisfy the exact concept, command behavior, or definition required in the question.
4. Verify the selected option with the standard Computer Science principle; option B gives the only technically correct statement among the four choices.

Final Answer:

(B) A minimal set of attributes that can uniquely identify a tuple

Answer: (B)

Q10.

Solution

Concept: Database Concepts – Selection filters tuples or rows based on a predicate.

Solution:

1. Identify the demand of the question: it is testing database concepts in a CUET-style objective format.
2. Apply the relevant rule: Selection filters tuples or rows based on a predicate.
3. Eliminate the distractors: options A, C, D do not satisfy the exact concept, command behavior, or definition required in the question.
4. Verify the selected option with the standard Computer Science principle; option B gives the only technically correct statement among the four choices.

Final Answer:

(B) Selection

Answer: (B)

Q11.

Solution

Concept: Database Concepts – Projection returns selected attributes or columns.

Solution:

1. Identify the demand of the question: it is testing database concepts in a CUET-style objective format.
2. Apply the relevant rule: Projection returns selected attributes or columns.
3. Eliminate the distractors: options A, C, D do not satisfy the exact concept, command behavior, or definition required in the question.
4. Verify the selected option with the standard Computer Science principle; option B gives the only technically correct statement among the four choices.

Final Answer:

(B) Projection

Answer: (B)

Q12.

Solution

Concept: Database Concepts – A foreign key establishes referential integrity by referring to a key in another table.

Solution:

1. Identify the demand of the question: it is testing database concepts in a CUET-style objective format.
2. Apply the relevant rule: A foreign key establishes referential integrity by referring to a key in another table.
3. Eliminate the distractors: options A, C, D do not satisfy the exact concept, command behavior, or definition required in the question.
4. Verify the selected option with the standard Computer Science principle; option B gives the only technically correct statement among the four choices.

Final Answer:

(B) The primary key of another related table

Answer: (B)

Q13.

Solution

Concept: Networking – Star topology connects every node to a central hub or switch.

Solution:

1. Identify the demand of the question: it is testing networking in a CUET-style objective format.
2. Apply the relevant rule: Star topology connects every node to a central hub or switch.
3. Eliminate the distractors: options A, B, D do not satisfy the exact concept, command behavior, or definition required in the question.
4. Verify the selected option with the standard Computer Science principle; option C gives the only technically correct statement among the four choices.

Final Answer:

(C) Star

Answer: (C)

Q14.

Solution

Concept: Networking – A router uses logical IP addressing to route packets across networks.

Solution:

1. Identify the demand of the question: it is testing networking in a CUET-style objective format.
2. Apply the relevant rule: A router uses logical IP addressing to route packets across networks.
3. Eliminate the distractors: options A, C, D do not satisfy the exact concept, command behavior, or definition required in the question.
4. Verify the selected option with the standard Computer Science principle; option B gives the only technically correct statement among the four choices.

Final Answer:

(B) Router

Answer: (B)

Q15.

Solution

Concept: Networking – MAC is a hardware identifier at data link layer, while IP is a logical address at network layer.

Solution:

1. Identify the demand of the question: it is testing networking in a CUET-style objective format.
2. Apply the relevant rule: MAC is a hardware identifier at data link layer, while IP is a logical address at network layer.
3. Eliminate the distractors: options A, C, D do not satisfy the exact concept, command behavior, or definition required in the question.
4. Verify the selected option with the standard Computer Science principle; option B gives the only technically correct statement among the four choices.

Final Answer:

(B) MAC is physical hardware address and IP is logical network address

Answer: (B)

Q16.

Solution

Concept: Data Structures – A stack follows Last-In First-Out order.

Solution:

1. Identify the demand of the question: it is testing data structures in a CUET-style objective format.
2. Apply the relevant rule: A stack follows Last-In First-Out order.
3. Eliminate the distractors: options A, C, D do not satisfy the exact concept, command behavior, or definition required in the question.
4. Verify the selected option with the standard Computer Science principle; option B gives the only technically correct statement among the four choices.

Final Answer:

(B) Stack

Answer: (B)

Q17.

Solution

Concept: Data Structures – The last pushed item before the final POP is 2.

Solution:

1. Identify the demand of the question: it is testing data structures in a CUET-style objective format.
2. Apply the relevant rule: The last pushed item before the final POP is 2.
3. Eliminate the distractors: options A, B, D do not satisfy the exact concept, command behavior, or definition required in the question.
4. Verify the selected option with the standard Computer Science principle; option C gives the only technically correct statement among the four choices.

Final Answer:

(C) 2

Answer: (C)

Q18.

Solution

Concept: Data Structures – First compute 2+3=5, then 6*5=30.

Solution:

1. Identify the demand of the question: it is testing data structures in a CUET-style objective format.
2. Apply the relevant rule: First compute 2+3=5, then 6*5=30.
3. Eliminate the distractors: options B, C, D do not satisfy the exact concept, command behavior, or definition required in the question.
4. Verify the selected option with the standard Computer Science principle; option A gives the only technically correct statement among the four choices.

Final Answer:

(A) 30

Answer: (A)

Q19.

Solution

Concept: Data Structures – A B + is evaluated first, and its result is multiplied by C.

Solution:

1. Identify the demand of the question: it is testing data structures in a CUET-style objective format.
2. Apply the relevant rule: A B + is evaluated first, and its result is multiplied by C.
3. Eliminate the distractors: options A, C, D do not satisfy the exact concept, command behavior, or definition required in the question.
4. Verify the selected option with the standard Computer Science principle; option B gives the only technically correct statement among the four choices.

Final Answer:

(B) (A + B) * C

Answer: (B)

Q20.

Solution

Concept: Data Structures – A queue follows First-In First-Out order.

Solution:

1. Identify the demand of the question: it is testing data structures in a CUET-style objective format.
2. Apply the relevant rule: A queue follows First-In First-Out order.
3. Eliminate the distractors: options A, C, D do not satisfy the exact concept, command behavior, or definition required in the question.
4. Verify the selected option with the standard Computer Science principle; option B gives the only technically correct statement among the four choices.

Final Answer:

(B) Queue

Answer: (B)

Q21.

Solution

Concept: Data Structures – Queue deletion is performed at the front end.

Solution:

1. Identify the demand of the question: it is testing data structures in a CUET-style objective format.
2. Apply the relevant rule: Queue deletion is performed at the front end.
3. Eliminate the distractors: options A, C, D do not satisfy the exact concept, command behavior, or definition required in the question.
4. Verify the selected option with the standard Computer Science principle; option B gives the only technically correct statement among the four choices.

Final Answer:

(B) Front

Answer: (B)

Q22.

Solution

Concept: Data Structures – A node stores data and a reference to the next node.

Solution:

1. Identify the demand of the question: it is testing data structures in a CUET-style objective format.
2. Apply the relevant rule: A node stores data and a reference to the next node.
3. Eliminate the distractors: options A, C, D do not satisfy the exact concept, command behavior, or definition required in the question.
4. Verify the selected option with the standard Computer Science principle; option B gives the only technically correct statement among the four choices.

Final Answer:

(B) Data and link/address of next node

Answer: (B)

Q23.

Solution

Concept: Data Structures – Underflow occurs when deletion is attempted from an empty stack.

Solution:

1. Identify the demand of the question: it is testing data structures in a CUET-style objective format.
2. Apply the relevant rule: Underflow occurs when deletion is attempted from an empty stack.
3. Eliminate the distractors: options A, C, D do not satisfy the exact concept, command behavior, or definition required in the question.
4. Verify the selected option with the standard Computer Science principle; option B gives the only technically correct statement among the four choices.

Final Answer:

(B) Popping from an empty stack

Answer: (B)

Q24.

Solution

Concept: Data Structures – Exponentiation normally has higher precedence than multiplication and addition.

Solution:

1. Identify the demand of the question: it is testing data structures in a CUET-style objective format.
2. Apply the relevant rule: Exponentiation normally has higher precedence than multiplication and addition.
3. Eliminate the distractors: options A, B, C do not satisfy the exact concept, command behavior, or definition required in the question.
4. Verify the selected option with the standard Computer Science principle; option D gives the only technically correct statement among the four choices.

Final Answer:

(D) exponent operator

Answer: (D)

Q25.

Solution

Concept: Data Structures – ENQUEUE inserts a new element at the rear of a queue.

Solution:

1. Identify the demand of the question: it is testing data structures in a CUET-style objective format.
2. Apply the relevant rule: ENQUEUE inserts a new element at the rear of a queue.
3. Eliminate the distractors: options A, B, D do not satisfy the exact concept, command behavior, or definition required in the question.
4. Verify the selected option with the standard Computer Science principle; option C gives the only technically correct statement among the four choices.

Final Answer:

(C) ENQUEUE

Answer: (C)

Q26.

Solution

Concept: Data Structures – Function calls use a stack to store activation records and return addresses.

Solution:

1. Identify the demand of the question: it is testing data structures in a CUET-style objective format.
2. Apply the relevant rule: Function calls use a stack to store activation records and return addresses.
3. Eliminate the distractors: options A, C, D do not satisfy the exact concept, command behavior, or definition required in the question.
4. Verify the selected option with the standard Computer Science principle; option B gives the only technically correct statement among the four choices.

Final Answer:

(B) Function call management

Answer: (B)

Q27.

Solution

Concept: Searching and Sorting – Binary search repeatedly halves the search interval and requires sorted data.

Solution:

1. Identify the demand of the question: it is testing searching and sorting in a CUET-style objective format.
2. Apply the relevant rule: Binary search repeatedly halves the search interval and requires sorted data.
3. Eliminate the distractors: options A, C, D do not satisfy the exact concept, command behavior, or definition required in the question.
4. Verify the selected option with the standard Computer Science principle; option B gives the only technically correct statement among the four choices.

Final Answer:

(B) Sorted

Answer: (B)

Q28.

Solution

Concept: Searching and Sorting – Linear search may need to check every element once.

Solution:

1. Identify the demand of the question: it is testing searching and sorting in a CUET-style objective format.
2. Apply the relevant rule: Linear search may need to check every element once.
3. Eliminate the distractors: options A, B, D do not satisfy the exact concept, command behavior, or definition required in the question.
4. Verify the selected option with the standard Computer Science principle; option C gives the only technically correct statement among the four choices.

Final Answer:

(C) n comparisons

Answer: (C)

Q29.

Solution

Concept: Searching and Sorting – Bubble sort works by adjacent comparison and swapping.

Solution:

1. Identify the demand of the question: it is testing searching and sorting in a CUET-style objective format.
2. Apply the relevant rule: Bubble sort works by adjacent comparison and swapping.
3. Eliminate the distractors: options A, C, D do not satisfy the exact concept, command behavior, or definition required in the question.
4. Verify the selected option with the standard Computer Science principle; option B gives the only technically correct statement among the four choices.

Final Answer:

(B) Bubble sort

Answer: (B)

Q30.

Solution

Concept: Searching and Sorting – Selection sort selects the smallest element and places it at the correct position.

Solution:

1. Identify the demand of the question: it is testing searching and sorting in a CUET-style objective format.
2. Apply the relevant rule: Selection sort selects the smallest element and places it at the correct position.
3. Eliminate the distractors: options A, C, D do not satisfy the exact concept, command behavior, or definition required in the question.
4. Verify the selected option with the standard Computer Science principle; option B gives the only technically correct statement among the four choices.

Final Answer:

(B) Selection sort

Answer: (B)

Q31.

Solution

Concept: Searching and Sorting – Insertion sort performs well on nearly sorted data because few shifts are needed.

Solution:

1. Identify the demand of the question: it is testing searching and sorting in a CUET-style objective format.
2. Apply the relevant rule: Insertion sort performs well on nearly sorted data because few shifts are needed.
3. Eliminate the distractors: options B, C, D do not satisfy the exact concept, command behavior, or definition required in the question.
4. Verify the selected option with the standard Computer Science principle; option A gives the only technically correct statement among the four choices.

Final Answer:

(A) Already nearly sorted

Answer: (A)

Q32.

Solution

Concept: Searching and Sorting – On average linear search checks a constant fraction of n elements, so it is O(n).

Solution:

1. Identify the demand of the question: it is testing searching and sorting in a CUET-style objective format.
2. Apply the relevant rule: On average linear search checks a constant fraction of n elements, so it is O(n).
3. Eliminate the distractors: options A, B, D do not satisfy the exact concept, command behavior, or definition required in the question.
4. Verify the selected option with the standard Computer Science principle; option C gives the only technically correct statement among the four choices.

Final Answer:

(C) O(n)

Answer: (C)

Q33.

Solution

Concept: Searching and Sorting – Binary search needs about log2(32)+1 style checks; among options, 5 is closest for halving levels.

Solution:

1. Identify the demand of the question: it is testing searching and sorting in a CUET-style objective format.
2. Apply the relevant rule: Binary search needs about log2(32)+1 style checks; among options, 5 is closest for halving levels.
3. Eliminate the distractors: options A, C, D do not satisfy the exact concept, command behavior, or definition required in the question.
4. Verify the selected option with the standard Computer Science principle; option B gives the only technically correct statement among the four choices.

Final Answer:

(B) 5

Answer: (B)

Q34.

Solution

Concept: Searching and Sorting – The largest element bubbles to the last position after one complete pass.

Solution:

1. Identify the demand of the question: it is testing searching and sorting in a CUET-style objective format.
2. Apply the relevant rule: The largest element bubbles to the last position after one complete pass.
3. Eliminate the distractors: options A, B, D do not satisfy the exact concept, command behavior, or definition required in the question.
4. Verify the selected option with the standard Computer Science principle; option C gives the only technically correct statement among the four choices.

Final Answer:

(C) Largest

Answer: (C)

Q35.

Solution

Concept: Searching and Sorting – Linear search scans elements one by one.

Solution:

1. Identify the demand of the question: it is testing searching and sorting in a CUET-style objective format.
2. Apply the relevant rule: Linear search scans elements one by one.
3. Eliminate the distractors: options A, C, D do not satisfy the exact concept, command behavior, or definition required in the question.
4. Verify the selected option with the standard Computer Science principle; option B gives the only technically correct statement among the four choices.

Final Answer:

(B) Linear search

Answer: (B)

Q36.

Solution

Concept: Python Handling – The try block contains risky code and except handles the raised exception.

Solution:

1. Identify the demand of the question: it is testing python handling in a CUET-style objective format.
2. Apply the relevant rule: The try block contains risky code and except handles the raised exception.
3. Eliminate the distractors: options A, C, D do not satisfy the exact concept, command behavior, or definition required in the question.
4. Verify the selected option with the standard Computer Science principle; option B gives the only technically correct statement among the four choices.

Final Answer:

(B) try-except

Answer: (B)

Q37.

Solution

Concept: Python Handling – Python raises ZeroDivisionError when a number is divided by zero.

Solution:

1. Identify the demand of the question: it is testing python handling in a CUET-style objective format.
2. Apply the relevant rule: Python raises ZeroDivisionError when a number is divided by zero.
3. Eliminate the distractors: options A, B, D do not satisfy the exact concept, command behavior, or definition required in the question.
4. Verify the selected option with the standard Computer Science principle; option C gives the only technically correct statement among the four choices.

Final Answer:

(C) ZeroDivisionError

Answer: (C)

Q38.

Solution

Concept: Python Handling – finally is used for cleanup code that must execute in all cases.

Solution:

1. Identify the demand of the question: it is testing python handling in a CUET-style objective format.
2. Apply the relevant rule: finally is used for cleanup code that must execute in all cases.
3. Eliminate the distractors: options A, C, D do not satisfy the exact concept, command behavior, or definition required in the question.
4. Verify the selected option with the standard Computer Science principle; option B gives the only technically correct statement among the four choices.

Final Answer:

(B) It runs whether an exception occurs or not

Answer: (B)

Q39.

Solution

Concept: Python Handling – Mode r opens an existing text file for reading.

Solution:

1. Identify the demand of the question: it is testing python handling in a CUET-style objective format.
2. Apply the relevant rule: Mode r opens an existing text file for reading.
3. Eliminate the distractors: options A, C, D do not satisfy the exact concept, command behavior, or definition required in the question.
4. Verify the selected option with the standard Computer Science principle; option B gives the only technically correct statement among the four choices.

Final Answer:

(B) r

Answer: (B)

Q40.

Solution

Concept: Python Handling – readlines returns a list containing all lines from the file.

Solution:

1. Identify the demand of the question: it is testing python handling in a CUET-style objective format.
2. Apply the relevant rule: readlines returns a list containing all lines from the file.
3. Eliminate the distractors: options A, B, D do not satisfy the exact concept, command behavior, or definition required in the question.
4. Verify the selected option with the standard Computer Science principle; option C gives the only technically correct statement among the four choices.

Final Answer:

(C) readlines()

Answer: (C)

Q41.

Solution

Concept: Python Handling – pickle serializes and deserializes Python objects in binary form.

Solution:

1. Identify the demand of the question: it is testing python handling in a CUET-style objective format.
2. Apply the relevant rule: pickle serializes and deserializes Python objects in binary form.
3. Eliminate the distractors: options A, C, D do not satisfy the exact concept, command behavior, or definition required in the question.
4. Verify the selected option with the standard Computer Science principle; option B gives the only technically correct statement among the four choices.

Final Answer:

(B) pickle

Answer: (B)

Q42.

Solution

Concept: Python Handling – The write method writes the given string to the file.

Solution:

1. Identify the demand of the question: it is testing python handling in a CUET-style objective format.
2. Apply the relevant rule: The write method writes the given string to the file.
3. Eliminate the distractors: options A, C, D do not satisfy the exact concept, command behavior, or definition required in the question.
4. Verify the selected option with the standard Computer Science principle; option B gives the only technically correct statement among the four choices.

Final Answer:

(B) f.write(”Hello”)

Answer: (B)

Q43.

Solution

Concept: Python Handling – seek(0) repositions the file pointer at the start of the file.

Solution:

1. Identify the demand of the question: it is testing python handling in a CUET-style objective format.
2. Apply the relevant rule: seek(0) repositions the file pointer at the start of the file.
3. Eliminate the distractors: options A, C, D do not satisfy the exact concept, command behavior, or definition required in the question.
4. Verify the selected option with the standard Computer Science principle; option B gives the only technically correct statement among the four choices.

Final Answer:

(B) Moves file pointer to the beginning

Answer: (B)

Q44.

Solution

Concept: Data Communication and Security – HTTP is the application-layer protocol used for web page transfer.

Solution:

1. Identify the demand of the question: it is testing data communication and security in a CUET-style objective format.
2. Apply the relevant rule: HTTP is the application-layer protocol used for web page transfer.
3. Eliminate the distractors: options A, C, D do not satisfy the exact concept, command behavior, or definition required in the question.
4. Verify the selected option with the standard Computer Science principle; option B gives the only technically correct statement among the four choices.

Final Answer:

(B) HTTP

Answer: (B)

Q45.

Solution

Concept: Data Communication and Security – FTP stands for File Transfer Protocol.

Solution:

1. Identify the demand of the question: it is testing data communication and security in a CUET-style objective format.
2. Apply the relevant rule: FTP stands for File Transfer Protocol.
3. Eliminate the distractors: options B, C, D do not satisfy the exact concept, command behavior, or definition required in the question.
4. Verify the selected option with the standard Computer Science principle; option A gives the only technically correct statement among the four choices.

Final Answer:

(A) FTP

Answer: (A)

Q46.

Solution

Concept: Data Communication and Security – Circuit switching first establishes a fixed end-to-end path.

Solution:

1. Identify the demand of the question: it is testing data communication and security in a CUET-style objective format.
2. Apply the relevant rule: Circuit switching first establishes a fixed end-to-end path.
3. Eliminate the distractors: options A, C, D do not satisfy the exact concept, command behavior, or definition required in the question.
4. Verify the selected option with the standard Computer Science principle; option B gives the only technically correct statement among the four choices.

Final Answer:

(B) Circuit switching

Answer: (B)

Q47.

Solution

Concept: Data Communication and Security – Half-duplex permits two-way communication, but one direction at a time.

Solution:

1. Identify the demand of the question: it is testing data communication and security in a CUET-style objective format.
2. Apply the relevant rule: Half-duplex permits two-way communication, but one direction at a time.
3. Eliminate the distractors: options A, C, D do not satisfy the exact concept, command behavior, or definition required in the question.
4. Verify the selected option with the standard Computer Science principle; option B gives the only technically correct statement among the four choices.

Final Answer:

(B) Half-duplex

Answer: (B)

Q48.

Solution

Concept: Data Communication and Security – A virus is malicious code that attaches to host programs and replicates.

Solution:

1. Identify the demand of the question: it is testing data communication and security in a CUET-style objective format.
2. Apply the relevant rule: A virus is malicious code that attaches to host programs and replicates.
3. Eliminate the distractors: options A, C, D do not satisfy the exact concept, command behavior, or definition required in the question.
4. Verify the selected option with the standard Computer Science principle; option B gives the only technically correct statement among the four choices.

Final Answer:

(B) Virus

Answer: (B)

Q49.

Solution

Concept: Data Communication and Security – A firewall monitors and filters network traffic using configured rules.

Solution:

1. Identify the demand of the question: it is testing data communication and security in a CUET-style objective format.
2. Apply the relevant rule: A firewall monitors and filters network traffic using configured rules.
3. Eliminate the distractors: options B, C, D do not satisfy the exact concept, command behavior, or definition required in the question.
4. Verify the selected option with the standard Computer Science principle; option A gives the only technically correct statement among the four choices.

Final Answer:

(A) Firewall

Answer: (A)

Q50.

Solution

Concept: Data Communication and Security – HTTPS protects web communication by encrypting it using SSL/TLS.

Solution:

1. Identify the demand of the question: it is testing data communication and security in a CUET-style objective format.
2. Apply the relevant rule: HTTPS protects web communication by encrypting it using SSL/TLS.
3. Eliminate the distractors: options A, C, D do not satisfy the exact concept, command behavior, or definition required in the question.
4. Verify the selected option with the standard Computer Science principle; option B gives the only technically correct statement among the four choices.

Final Answer:

(B) Encryption through SSL/TLS

Answer: (B)

Answer Key

Q	Ans	Q	Ans	Q	Ans	Q	Ans	Q	Ans
1	A	2	B	3	B	4	B	5	C
6	A	7	B	8	B	9	B	10	B
11	B	12	B	13	C	14	B	15	B
16	B	17	C	18	A	19	B	20	B
21	B	22	B	23	B	24	D	25	C
26	B	27	B	28	C	29	B	30	B
31	A	32	C	33	B	34	C	35	B
36	B	37	C	38	B	39	B	40	C
41	B	42	B	43	B	44	B	45	A
46	B	47	B	48	B	49	A	50	B