CUET-UG Computer Science Sample Paper-2

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 expression correctly returns the absolute value of -25?

(A) SELECT ABS(-25);

(B) SELECT SIGN(-25);

(C) SELECT CEIL(-25);

(D) SELECT ROUND(-25, 1);

Q2. In MySQL, what is the result of SELECT MOD(38, 7); ?

(A) 4

(B) 3

(C) 5

(D) 6

Q3. Which SQL function can return the first five characters from the string 'COMPUTER'?

(A) RIGHT('COMPUTER', 5)

(B) LOWER('COMPUTER', 5)

(C) LEFT('COMPUTER', 5)

(D) COUNT('COMPUTER', 5)

Q4. Which SQL statement returns the position of substring 'net' in the string 'Internet' in MySQL?

(A) SELECT AVG('Internet','net');
(B) SELECT MID('Internet', 'net');
(C) SELECT ORDER('Internet','net');
(D) SELECT INSTR('Internet', 'net');

Q5. What does SELECT DATE_ADD('2025-01-10', INTERVAL 12 DAY); return?

(A) 2025-01-12
(B) 2025-02-10
(C) 2024-12-29
(D) 2025-01-22

Q6. Which query returns the square of each value stored in column n of table Numbers?

(A) SELECT ROOT(n, 2) FROM Numbers;
(B) SELECT POWER(n, 2) FROM Numbers;
(C) SELECT ROUND(n, 2) FROM Numbers;
(D) SELECT LENGTH(n, 2) FROM Numbers;

Q7. Which SQL function replaces NULL with an alternate value in MySQL?

(A) IFNULL()
(B) ISDATE()
(C) GROUP()
(D) SELECTNULL()

Q8. Which clause filters grouped records after aggregate calculation?

(A) WHERE
(B) ORDER BY
(C) HAVING
(D) DISTINCT

Q9. In a relation Student(RollNo, CourseCode, Semester), if RollNo alone is not unique but RollNo and CourseCode together identify each row, the pair is a:

(A) Repeating group
(B) Composite key
(C) Unary operator
(D) Derived attribute

Q10. The number of tuples present in a relation is called its:

(A) Cardinality
(B) Degree
(C) Domain
(D) Attribute name

Q11. For UNION operation in relational algebra, the two participating relations must be:

(A) Always identical in row count
(B) Sorted in descending order
(C) Union-compatible
(D) Connected by a foreign key

Q12. A domain constraint mainly restricts:

(A) Number of tables in a database

(B) Sequence of SQL keywords

(C) Physical location of the database file

(D) Permissible values of an attribute

Q13. Which device commonly learns MAC addresses and forwards frames within a LAN?

(A) Router

(B) Gateway only

(C) Switch

(D) Modem only

Q14. Which topology provides the highest redundancy because many nodes can have direct links with many others?

(A) Mesh

(B) Bus

(C) Ring

(D) Linear

Q15. An IP address is mainly used to identify:

(A) Only the manufacturer of a network card

(B) A host logically on a network

(C) Only the cable length

(D) Only the keyboard attached to a system

Q16. Which stack operation returns the top element without removing it?

(A) DELETE

(B) ENQUEUE

(C) TRAVERSE only

(D) PEEK

Q17. If an empty stack receives PUSH 4, PUSH 9, PUSH 1, POP, PEEK, what does PEEK return?

(A) 9

(B) 1

(C) 4

(D) Stack underflow

Q18. Evaluate the postfix expression 8 2 / 3 2 * +.

(A) 7

(B) 14

(C) 10

(D) 16

Q19. Which postfix expression represents the infix expression $(A - B)/(C + D)$?

(A) A B C + - D /

(B) A B - C D + /

(C) A B / C D + -

(D) A B - C / D +

Q20. In an array-based stack of capacity n, overflow occurs when PUSH is attempted and:

(A) top equals 0

(B) top equals -1

(C) rear equals front

(D) top equals n-1

Q21. In a circular queue of size n, the queue is often considered full when:

(A) (rear + 1) mod n equals front

(B) rear equals -1 always

(C) front equals 0 always

(D) front is greater than rear always

Q22. If a queue has front element 12 followed by 18 and 21, after one dequeue the new front is:

(A) 12

(B) 21

(C) 18

(D) Queue underflow

Q23. Inserting a node at the beginning of a singly linked list primarily requires:

(A) Sorting all nodes first

(B) Making new node point to old head and updating head

(C) Deleting the last node

(D) Changing every data value

Q24. Which pointer value commonly marks the end of a singly linked list?

(A) TOP

(B) REAR

(C) ROOT only

(D) NULL

Q25. Which operation visits each node of a linked list exactly once to display its data?

(A) Traversal

(B) Overflow

(C) Hashing

(D) Compilation

Q26. Which structure is most suitable for undo operations in an editor?

(A) Simple queue

(B) Stack

(C) Circular queue only

(D) Adjacency matrix

Q27. In binary search, after comparing with the middle element, the next search interval is:

(A) Always the entire array again

(B) Only the first element

(C) One half of the current sorted interval

(D) Always an unsorted interval

Q28. For sorted list [3, 8, 14, 19, 27, 35, 42], searching 27 by binary search first compares with:

(A) 3

(B) 27

(C) 42

(D) 19

Q29. Which case gives the best-case time for linear search?

(A) Target is at the first position

(B) Target is absent

(C) Target is at the last position

(D) List is sorted descending

Q30. After one complete pass of selection sort in ascending order on [7, 2, 9, 4], the array becomes:

7, 2, 4, 9

2, 7, 9, 4

9, 7, 2, 4

4, 2, 9, 7

Q31. In insertion sort, the sorted portion grows by:

(A) Two elements after each comparison

(B) Deleting the minimum element

(C) One element after each pass

(D) Splitting the list into halves only

Q32. Which sorting algorithm usually performs $n-1$ passes and places the minimum element at its correct position each pass?

(A) Bubble sort

(B) Quick sort only

(C) Linear sort

(D) Selection sort

Q33. What is the worst-case time complexity of bubble sort?

(A) O(log n)

(B) O(n log n)

(C) O of n squared

(D) O(1)

Q34. For binary search on a sorted list of 15 elements, the maximum number of comparisons is:

(A) 7

(B) 4

(C) 15

(D) 2

Q35. Which algorithm is preferable when data is unsorted and only one search is required without preprocessing?

(A) Linear search

(B) Binary search

(C) Selection sort then search always

(D) Tree search without tree creation

Q36. In Python, which block can execute only when the try block completes without raising an exception?

(A) finally

(B) except

(C) raise

(D) else

Q37. Which exception is commonly raised when trying to open a non-existing file in read mode?

(A) FileNotFoundError

(B) ZeroDivisionError

(C) KeyboardInterrupt

(D) NameError only

Q38. Which file mode opens a binary file for reading?

(A) r

(B) wb+

(C) rb

(D) a

Q39. Which statement is most suitable for safely opening a file so that it closes automatically?

(A) open.close('data.txt')

(B) with open('data.txt','r') as f:

(C) try file('data.txt'):

(D) autoopen('data.txt')

Q40. Which pickle function writes a Python object into a binary file?

(A) pickle.load()

(B) pickle.read()

(C) pickle.input()

(D) pickle.dump()

Q41. Which pickle function reads a serialized object back from a binary file?

(A) pickle.dump()

(B) pickle.load()

(C) pickle.write()

(D) pickle.close()

Q42. Which mode opens a text file for appending new content at the end?

(A) a

(B) r

(C) w

(D) x

Q43. What does the tell() method of a Python file object return?

(A) Total number of vowels

(B) File extension only

(C) Current file pointer position

(D) Whether the file is encrypted

Q44. Which switching method divides data into small units that may travel independently through a network?

(A) Circuit switching

(B) Manual switching

(C) Line switching only

(D) Packet switching

Q45. Which protocol is mainly used for sending email from a client or server to a mail server?

(A) FTP

(B) SMTP

(C) TELNET only

(D) ARP

Q46. Which protocol translates domain names into IP addresses?

(A) DNS

(B) SMTP

(C) POP3

(D) FTP

Q47. Which communication mode allows simultaneous two-way communication?

(A) Simplex

(B) Half-duplex

(C) Full-duplex

(D) Receive-only

Q48. Which malware is self-replicating and can spread across networks without attaching to a host file?

(A) Adware only

(B) Worm

(C) Firewall

(D) Captcha

Q49. A fake login page designed to steal passwords is an example of:

(A) Packet switching

(B) Compression

(C) Normalization

(D) Phishing

Q50. Which security property ensures that data is not read by unauthorized users?

(A) Confidentiality

(B) Redundancy

(C) Latency

(D) Cardinality

Detailed Solutions

Q1.

Solution

Concept: SQL Functions – ABS() returns the non-negative magnitude of a numeric value, so ABS(-25) gives 25.

Solution:

Step 1: Identify the demand of the question.

The question checks sql functions through a fresh CUET-style MCQ where close distractors are used to test exact conceptual clarity.

Step 2: Apply the correct rule or principle.

ABS() returns the non-negative magnitude of a numeric value, so ABS(-25) gives 25.

Step 3: Eliminate the incorrect options.

(B): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

(C): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

(D): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

Step 4: Verify the answer.

The correct option is **(A)** because it directly satisfies the requirement stated in the question, while the other choices either perform another operation or describe an unrelated idea.

Final Answer:

(A) SELECT ABS(-25);

Answer: (A)

Q2.

Solution

Concept: SQL Functions – MOD(a,b) returns the remainder after dividing a by b; 38 divided by 7 leaves remainder 3.

Solution:

Step 1: Identify the demand of the question.

The question checks sql functions through a fresh CUET-style MCQ where close distractors are used to test exact conceptual clarity.

Step 2: Apply the correct rule or principle.

MOD(a,b) returns the remainder after dividing a by b; 38 divided by 7 leaves remainder 3.

Step 3: Eliminate the incorrect options.

(A): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

(C): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

(D): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

Step 4: Verify the answer.

The correct option is **(B)** because it directly satisfies the requirement stated in the question, while the other choices either perform another operation or describe an unrelated idea.

Final Answer:

(B) 3

Answer: (B)

Q3.

Solution

Concept: SQL Functions – LEFT(string,n) extracts n characters from the beginning of a string.

Solution:

Step 1: Identify the demand of the question.

The question checks sql functions through a fresh CUET-style MCQ where close distractors are used to test exact conceptual clarity.

Step 2: Apply the correct rule or principle.

LEFT(string,n) extracts n characters from the beginning of a string.

Step 3: Eliminate the incorrect options.

(A): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

(B): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

(D): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

Step 4: Verify the answer.

The correct option is **(C)** because it directly satisfies the requirement stated in the question, while the other choices either perform another operation or describe an unrelated idea.

Final Answer:

(C) LEFT('COMPUTER', 5)

Answer: (C)

Q4.

Solution

Concept: SQL Functions – INSTR(str, substr) returns the starting position of the substring inside the string.

Solution:

Step 1: Identify the demand of the question.

The question checks sql functions through a fresh CUET-style MCQ where close distractors are used to test exact conceptual clarity.

Step 2: Apply the correct rule or principle.

INSTR(str, substr) returns the starting position of the substring inside the string.

Step 3: Eliminate the incorrect options.

(A): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

(B): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

(C): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

Step 4: Verify the answer.

The correct option is **(D)** because it directly satisfies the requirement stated in the question, while the other choices either perform another operation or describe an unrelated idea.

Final Answer:

(D) SELECT INSTR('Internet', 'net');

Answer: (D)

Q5.

Solution

Concept: SQL Functions – DATE_ADD adds the specified interval to a date; 12 days after 10 January 2025 is 22 January 2025.

Solution:

Step 1: Identify the demand of the question.

The question checks sql functions through a fresh CUET-style MCQ where close distractors are used to test exact conceptual clarity.

Step 2: Apply the correct rule or principle.

DATE_ADD adds the specified interval to a date; 12 days after 10 January 2025 is 22 January 2025.

Step 3: Eliminate the incorrect options.

(A): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

(B): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

(C): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

Step 4: Verify the answer.

The correct option is **(D)** because it directly satisfies the requirement stated in the question, while the other choices either perform another operation or describe an unrelated idea.

Final Answer:

(D) 2025-01-22

Answer: (D)

Q6.

Solution

Concept: SQL Functions – POWER(n,2) computes n raised to the power 2, which is the square of n.

Solution:

Step 1: Identify the demand of the question.

The question checks sql functions through a fresh CUET-style MCQ where close distractors are used to test exact conceptual clarity.

Step 2: Apply the correct rule or principle.

POWER(n,2) computes n raised to the power 2, which is the square of n.

Step 3: Eliminate the incorrect options.

(A): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

(C): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

(D): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

Step 4: Verify the answer.

The correct option is **(B)** because it directly satisfies the requirement stated in the question, while the other choices either perform another operation or describe an unrelated idea.

Final Answer:

(B) SELECT POWER(n, 2) FROM Numbers;

Answer: (B)

Q7.

Solution

Concept: SQL Functions – IFNULL(expr, alt) returns alt when expr is NULL; otherwise it returns expr.

Solution:

Step 1: Identify the demand of the question.

The question checks sql functions through a fresh CUET-style MCQ where close distractors are used to test exact conceptual clarity.

Step 2: Apply the correct rule or principle.

IFNULL(expr, alt) returns alt when expr is NULL; otherwise it returns expr.

Step 3: Eliminate the incorrect options.

(B): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

(C): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

(D): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

Step 4: Verify the answer.

The correct option is **(A)** because it directly satisfies the requirement stated in the question, while the other choices either perform another operation or describe an unrelated idea.

Final Answer:

(A) IFNULL()

Answer: (A)

Q8.

Solution

Concept: SQL Functions – HAVING filters groups after aggregate functions have been calculated.

Solution:

Step 1: Identify the demand of the question.

The question checks sql functions through a fresh CUET-style MCQ where close distractors are used to test exact conceptual clarity.

Step 2: Apply the correct rule or principle.

HAVING filters groups after aggregate functions have been calculated.

Step 3: Eliminate the incorrect options.

(A): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

(B): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

(D): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

Step 4: Verify the answer.

The correct option is **(C)** because it directly satisfies the requirement stated in the question, while the other choices either perform another operation or describe an unrelated idea.

Final Answer:

(C) HAVING

Answer: (C)

Q9.

Solution

Concept: Database Concepts – A composite key uses more than one attribute together to uniquely identify a tuple.

Solution:

Step 1: Identify the demand of the question.

The question checks database concepts through a fresh CUET-style MCQ where close distractors are used to test exact conceptual clarity.

Step 2: Apply the correct rule or principle.

A composite key uses more than one attribute together to uniquely identify a tuple.

Step 3: Eliminate the incorrect options.

(A): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

(C): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

(D): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

Step 4: Verify the answer.

The correct option is **(B)** because it directly satisfies the requirement stated in the question, while the other choices either perform another operation or describe an unrelated idea.

Final Answer:

(B) Composite key

Answer: (B)

Q10.

Solution

Concept: Database Concepts – Cardinality refers to the number of rows or tuples in a relation.

Solution:

Step 1: Identify the demand of the question.

The question checks database concepts through a fresh CUET-style MCQ where close distractors are used to test exact conceptual clarity.

Step 2: Apply the correct rule or principle.

Cardinality refers to the number of rows or tuples in a relation.

Step 3: Eliminate the incorrect options.

(B): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

(C): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

(D): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

Step 4: Verify the answer.

The correct option is **(A)** because it directly satisfies the requirement stated in the question, while the other choices either perform another operation or describe an unrelated idea.

Final Answer:

(A) Cardinality

Answer: (A)

Q11.

Solution

Concept: Database Concepts – UNION requires compatible relations with the same degree and corresponding comparable domains.

Solution:

Step 1: Identify the demand of the question.

The question checks database concepts through a fresh CUET-style MCQ where close distractors are used to test exact conceptual clarity.

Step 2: Apply the correct rule or principle.

UNION requires compatible relations with the same degree and corresponding comparable domains.

Step 3: Eliminate the incorrect options.

(A): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

(B): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

(D): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

Step 4: Verify the answer.

The correct option is **(C)** because it directly satisfies the requirement stated in the question, while the other choices either perform another operation or describe an unrelated idea.

Final Answer:

(C) Union-compatible

Answer: (C)

Q12.

Solution

Concept: Database Concepts – A domain constraint defines the valid set of values that an attribute can store.

Solution:

Step 1: Identify the demand of the question.

The question checks database concepts through a fresh CUET-style MCQ where close distractors are used to test exact conceptual clarity.

Step 2: Apply the correct rule or principle.

A domain constraint defines the valid set of values that an attribute can store.

Step 3: Eliminate the incorrect options.

(A): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

(B): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

(C): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

Step 4: Verify the answer.

The correct option is **(D)** because it directly satisfies the requirement stated in the question, while the other choices either perform another operation or describe an unrelated idea.

Final Answer:

(D) Permissible values of an attribute

Answer: (D)

Q13.

Solution

Concept: Networking – A switch works mainly at the data link layer and forwards frames using MAC address tables.

Solution:

Step 1: Identify the demand of the question.

The question checks networking through a fresh CUET-style MCQ where close distractors are used to test exact conceptual clarity.

Step 2: Apply the correct rule or principle.

A switch works mainly at the data link layer and forwards frames using MAC address tables.

Step 3: Eliminate the incorrect options.

(A): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

(B): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

(D): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

Step 4: Verify the answer.

The correct option is **(C)** because it directly satisfies the requirement stated in the question, while the other choices either perform another operation or describe an unrelated idea.

Final Answer:

(C) Switch

Answer: (C)

Q14.

Solution

Concept: Networking – Mesh topology provides multiple paths between devices, improving fault tolerance.

Solution:

Step 1: Identify the demand of the question.

The question checks networking through a fresh CUET-style MCQ where close distractors are used to test exact conceptual clarity.

Step 2: Apply the correct rule or principle.

Mesh topology provides multiple paths between devices, improving fault tolerance.

Step 3: Eliminate the incorrect options.

(B): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

(C): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

(D): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

Step 4: Verify the answer.

The correct option is **(A)** because it directly satisfies the requirement stated in the question, while the other choices either perform another operation or describe an unrelated idea.

Final Answer:

(A) Mesh

Answer: (A)

Q15.

Solution

Concept: Networking – IP address is a logical network-layer address used for host identification and routing.

Solution:

Step 1: Identify the demand of the question.

The question checks networking through a fresh CUET-style MCQ where close distractors are used to test exact conceptual clarity.

Step 2: Apply the correct rule or principle.

IP address is a logical network-layer address used for host identification and routing.

Step 3: Eliminate the incorrect options.

(A): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

(C): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

(D): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

Step 4: Verify the answer.

The correct option is **(B)** because it directly satisfies the requirement stated in the question, while the other choices either perform another operation or describe an unrelated idea.

Final Answer:

(B) A host logically on a network

Answer: (B)

Q16.

Solution

Concept: Data Structures – PEEK reads the top item of a stack without changing the stack contents.

Solution:

Step 1: Identify the demand of the question.

The question checks data structures through a fresh CUET-style MCQ where close distractors are used to test exact conceptual clarity.

Step 2: Apply the correct rule or principle.

PEEK reads the top item of a stack without changing the stack contents.

Step 3: Eliminate the incorrect options.

(A): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

(B): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

(C): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

Step 4: Verify the answer.

The correct option is **(D)** because it directly satisfies the requirement stated in the question, while the other choices either perform another operation or describe an unrelated idea.

Final Answer:

(D) PEEK

Answer: (D)

Q17.

Solution

Concept: Data Structures – After popping 1, the top element becomes 9, so PEEK returns 9.

Solution:

Step 1: Identify the demand of the question.

The question checks data structures through a fresh CUET-style MCQ where close distractors are used to test exact conceptual clarity.

Step 2: Apply the correct rule or principle.

After popping 1, the top element becomes 9, so PEEK returns 9.

Step 3: Eliminate the incorrect options.

(B): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

(C): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

(D): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

Step 4: Verify the answer.

The correct option is **(A)** because it directly satisfies the requirement stated in the question, while the other choices either perform another operation or describe an unrelated idea.

Final Answer:

(A) 9

Answer: (A)

Q18.

Solution

Concept: Data Structures – 8 2 / gives 4 and 3 2 * gives 6; 4+6 equals 10.

Solution:

Step 1: Identify the demand of the question.

The question checks data structures through a fresh CUET-style MCQ where close distractors are used to test exact conceptual clarity.

Step 2: Apply the correct rule or principle.

8 2 / gives 4 and 3 2 * gives 6; 4+6 equals 10.

Step 3: Eliminate the incorrect options.

(A): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

(B): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

(D): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

Step 4: Verify the answer.

The correct option is **(C)** because it directly satisfies the requirement stated in the question, while the other choices either perform another operation or describe an unrelated idea.

Final Answer:

(C) 10

Answer: (C)

Q19.

Solution

Concept: Data Structures – The numerator A-B and denominator C+D are each formed first, followed by division.

Solution:

Step 1: Identify the demand of the question.

The question checks data structures through a fresh CUET-style MCQ where close distractors are used to test exact conceptual clarity.

Step 2: Apply the correct rule or principle.

The numerator A-B and denominator C+D are each formed first, followed by division.

Step 3: Eliminate the incorrect options.

(A): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

(C): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

(D): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

Step 4: Verify the answer.

The correct option is **(B)** because it directly satisfies the requirement stated in the question, while the other choices either perform another operation or describe an unrelated idea.

Final Answer:

(B) A B - C D + /

Answer: (B)

Q20.

Solution

Concept: Data Structures – In zero-indexed array stack implementation, top equal to n-1 indicates the last slot is already occupied.

Solution:

Step 1: Identify the demand of the question.

The question checks data structures through a fresh CUET-style MCQ where close distractors are used to test exact conceptual clarity.

Step 2: Apply the correct rule or principle.

In zero-indexed array stack implementation, top equal to n-1 indicates the last slot is already occupied.

Step 3: Eliminate the incorrect options.

(A): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

(B): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

(C): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

Step 4: Verify the answer.

The correct option is **(D)** because it directly satisfies the requirement stated in the question, while the other choices either perform another operation or describe an unrelated idea.

Final Answer:

(D) top equals n-1

Answer: (D)

Q21.

Solution

Concept: Data Structures – The condition (rear+1) mod n = front indicates no free circular position remains.

Solution:

Step 1: Identify the demand of the question.

The question checks data structures through a fresh CUET-style MCQ where close distractors are used to test exact conceptual clarity.

Step 2: Apply the correct rule or principle.

The condition (rear+1) mod n = front indicates no free circular position remains.

Step 3: Eliminate the incorrect options.

(B): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

(C): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

(D): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

Step 4: Verify the answer.

The correct option is **(A)** because it directly satisfies the requirement stated in the question, while the other choices either perform another operation or describe an unrelated idea.

Final Answer:

(A) (rear + 1) mod n equals front

Answer: (A)

Q22.

Solution

Concept: Data Structures – Queue deletion removes the oldest front item; after deleting 12, 18 becomes the front.

Solution:

Step 1: Identify the demand of the question.

The question checks data structures through a fresh CUET-style MCQ where close distractors are used to test exact conceptual clarity.

Step 2: Apply the correct rule or principle.

Queue deletion removes the oldest front item; after deleting 12, 18 becomes the front.

Step 3: Eliminate the incorrect options.

(A): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

(B): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

(D): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

Step 4: Verify the answer.

The correct option is **(C)** because it directly satisfies the requirement stated in the question, while the other choices either perform another operation or describe an unrelated idea.

Final Answer:

(C) 18

Answer: (C)

Q23.

Solution

Concept: Data Structures – At beginning insertion, the new node links to the current first node, then head is updated.

Solution:

Step 1: Identify the demand of the question.

The question checks data structures through a fresh CUET-style MCQ where close distractors are used to test exact conceptual clarity.

Step 2: Apply the correct rule or principle.

At beginning insertion, the new node links to the current first node, then head is updated.

Step 3: Eliminate the incorrect options.

(A): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

(C): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

(D): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

Step 4: Verify the answer.

The correct option is **(B)** because it directly satisfies the requirement stated in the question, while the other choices either perform another operation or describe an unrelated idea.

Final Answer:

(B) Making new node point to old head and updating head

Answer: (B)

Q24.

Solution

Concept: Data Structures – The last node in a singly linked list normally stores NULL in its next field.

Solution:

Step 1: Identify the demand of the question.

The question checks data structures through a fresh CUET-style MCQ where close distractors are used to test exact conceptual clarity.

Step 2: Apply the correct rule or principle.

The last node in a singly linked list normally stores NULL in its next field.

Step 3: Eliminate the incorrect options.

(A): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

(B): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

(C): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

Step 4: Verify the answer.

The correct option is **(D)** because it directly satisfies the requirement stated in the question, while the other choices either perform another operation or describe an unrelated idea.

Final Answer:

(D) NULL

Answer: (D)

Q25.

Solution

Concept: Data Structures – Traversal means moving through the list node by node and processing each node.

Solution:

Step 1: Identify the demand of the question.

The question checks data structures through a fresh CUET-style MCQ where close distractors are used to test exact conceptual clarity.

Step 2: Apply the correct rule or principle.

Traversal means moving through the list node by node and processing each node.

Step 3: Eliminate the incorrect options.

(B): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

(C): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

(D): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

Step 4: Verify the answer.

The correct option is **(A)** because it directly satisfies the requirement stated in the question, while the other choices either perform another operation or describe an unrelated idea.

Final Answer:

(A) Traversal

Answer: (A)

Q26.

Solution

Concept: Data Structures – Undo requires accessing the most recent action first, which matches LIFO behavior of a stack.

Solution:

Step 1: Identify the demand of the question.

The question checks data structures through a fresh CUET-style MCQ where close distractors are used to test exact conceptual clarity.

Step 2: Apply the correct rule or principle.

Undo requires accessing the most recent action first, which matches LIFO behavior of a stack.

Step 3: Eliminate the incorrect options.

(A): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

(C): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

(D): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

Step 4: Verify the answer.

The correct option is **(B)** because it directly satisfies the requirement stated in the question, while the other choices either perform another operation or describe an unrelated idea.

Final Answer:

(B) Stack

Answer: (B)

Q27.

Solution

Concept: Searching and Sorting – Binary search discards one half of the sorted search range after each comparison.

Solution:

Step 1: Identify the demand of the question.

The question checks searching and sorting through a fresh CUET-style MCQ where close distractors are used to test exact conceptual clarity.

Step 2: Apply the correct rule or principle.

Binary search discards one half of the sorted search range after each comparison.

Step 3: Eliminate the incorrect options.

(A): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

(B): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

(D): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

Step 4: Verify the answer.

The correct option is **(C)** because it directly satisfies the requirement stated in the question, while the other choices either perform another operation or describe an unrelated idea.

Final Answer:

(C) One half of the current sorted interval

Answer: (C)

Q28.

Solution

Concept: Searching and Sorting – The middle index of seven elements is the fourth position, whose value is 19.

Solution:

Step 1: Identify the demand of the question.

The question checks searching and sorting through a fresh CUET-style MCQ where close distractors are used to test exact conceptual clarity.

Step 2: Apply the correct rule or principle.

The middle index of seven elements is the fourth position, whose value is 19.

Step 3: Eliminate the incorrect options.

(A): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

(B): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

(C): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

Step 4: Verify the answer.

The correct option is **(D)** because it directly satisfies the requirement stated in the question, while the other choices either perform another operation or describe an unrelated idea.

Final Answer:

(D) 19

Answer: (D)

Q29.

Solution

Concept: Searching and Sorting – Linear search stops immediately if the first element is the target.

Solution:

Step 1: Identify the demand of the question.

The question checks searching and sorting through a fresh CUET-style MCQ where close distractors are used to test exact conceptual clarity.

Step 2: Apply the correct rule or principle.

Linear search stops immediately if the first element is the target.

Step 3: Eliminate the incorrect options.

(B): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

(C): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

(D): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

Step 4: Verify the answer.

The correct option is **(A)** because it directly satisfies the requirement stated in the question, while the other choices either perform another operation or describe an unrelated idea.

Final Answer:

(A) Target is at the first position

Answer: (A)

Q30.

Solution

Concept: Searching and Sorting – Selection sort selects the smallest element 2 and swaps it with the first element.

Solution:

Step 1: Identify the demand of the question.

The question checks searching and sorting through a fresh CUET-style MCQ where close distractors are used to test exact conceptual clarity.

Step 2: Apply the correct rule or principle.

Selection sort selects the smallest element 2 and swaps it with the first element.

Step 3: Eliminate the incorrect options.

(A): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

(C): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

(D): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

Step 4: Verify the answer.

The correct option is **(B)** because it directly satisfies the requirement stated in the question, while the other choices either perform another operation or describe an unrelated idea.

Final Answer:

$$\boxed{\text{(B) [2, 7, 9, 4]}}$$

Answer: (B)

Q31.

Solution

Concept: Searching and Sorting – Insertion sort inserts one new element into its correct position in the sorted left part on each pass.

Solution:

Step 1: Identify the demand of the question.

The question checks searching and sorting through a fresh CUET-style MCQ where close distractors are used to test exact conceptual clarity.

Step 2: Apply the correct rule or principle.

Insertion sort inserts one new element into its correct position in the sorted left part on each pass.

Step 3: Eliminate the incorrect options.

(A): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

(B): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

(D): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

Step 4: Verify the answer.

The correct option is **(C)** because it directly satisfies the requirement stated in the question, while the other choices either perform another operation or describe an unrelated idea.

Final Answer:

(C) One element after each pass

Answer: (C)

Q32.

Solution

Concept: Searching and Sorting – Selection sort repeatedly selects the minimum element from the unsorted portion.

Solution:

Step 1: Identify the demand of the question.

The question checks searching and sorting through a fresh CUET-style MCQ where close distractors are used to test exact conceptual clarity.

Step 2: Apply the correct rule or principle.

Selection sort repeatedly selects the minimum element from the unsorted portion.

Step 3: Eliminate the incorrect options.

(A): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

(B): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

(C): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

Step 4: Verify the answer.

The correct option is **(D)** because it directly satisfies the requirement stated in the question, while the other choices either perform another operation or describe an unrelated idea.

Final Answer:

(D) Selection sort

Answer: (D)

Q33.

Solution

Concept: Searching and Sorting – Nested adjacent comparisons in bubble sort lead to quadratic worst-case time.

Solution:

Step 1: Identify the demand of the question.

The question checks searching and sorting through a fresh CUET-style MCQ where close distractors are used to test exact conceptual clarity.

Step 2: Apply the correct rule or principle.

Nested adjacent comparisons in bubble sort lead to quadratic worst-case time.

Step 3: Eliminate the incorrect options.

(A): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

(B): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

(D): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

Step 4: Verify the answer.

The correct option is **(C)** because it directly satisfies the requirement stated in the question, while the other choices either perform another operation or describe an unrelated idea.

Final Answer:

(C) O of n squared

Answer: (C)

Q34.

Solution

Concept: Searching and Sorting – Binary search needs at most ceil(log2(15+1)) = 4 comparisons.

Solution:

Step 1: Identify the demand of the question.

The question checks searching and sorting through a fresh CUET-style MCQ where close distractors are used to test exact conceptual clarity.

Step 2: Apply the correct rule or principle.

Binary search needs at most ceil(log2(15+1)) = 4 comparisons.

Step 3: Eliminate the incorrect options.

(A): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

(C): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

(D): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

Step 4: Verify the answer.

The correct option is **(B)** because it directly satisfies the requirement stated in the question, while the other choices either perform another operation or describe an unrelated idea.

Final Answer:

(B) 4

Answer: (B)

Q35.

Solution

Concept: Searching and Sorting – For one search on unsorted data, linear search avoids sorting overhead.

Solution:

Step 1: Identify the demand of the question.

The question checks searching and sorting through a fresh CUET-style MCQ where close distractors are used to test exact conceptual clarity.

Step 2: Apply the correct rule or principle.

For one search on unsorted data, linear search avoids sorting overhead.

Step 3: Eliminate the incorrect options.

(B): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

(C): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

(D): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

Step 4: Verify the answer.

The correct option is **(A)** because it directly satisfies the requirement stated in the question, while the other choices either perform another operation or describe an unrelated idea.

Final Answer:

(A) Linear search

Answer: (A)

Q36.

Solution

Concept: Python Handling – The else block associated with try-except runs only if no exception occurs in the try block.

Solution:

Step 1: Identify the demand of the question.

The question checks python handling through a fresh CUET-style MCQ where close distractors are used to test exact conceptual clarity.

Step 2: Apply the correct rule or principle.

The else block associated with try-except runs only if no exception occurs in the try block.

Step 3: Eliminate the incorrect options.

(A): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

(B): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

(C): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

Step 4: Verify the answer.

The correct option is **(D)** because it directly satisfies the requirement stated in the question, while the other choices either perform another operation or describe an unrelated idea.

Final Answer:

(D) else

Answer: (D)

Q37.

Solution

Concept: Python Handling – Opening a missing file with read mode raises FileNotFoundError.

Solution:

Step 1: Identify the demand of the question.

The question checks python handling through a fresh CUET-style MCQ where close distractors are used to test exact conceptual clarity.

Step 2: Apply the correct rule or principle.

Opening a missing file with read mode raises FileNotFoundError.

Step 3: Eliminate the incorrect options.

(B): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

(C): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

(D): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

Step 4: Verify the answer.

The correct option is **(A)** because it directly satisfies the requirement stated in the question, while the other choices either perform another operation or describe an unrelated idea.

Final Answer:

(A) FileNotFoundError

Answer: (A)

Q38.

Solution

Concept: Python Handling – The b in rb denotes binary mode and r denotes reading.

Solution:

Step 1: Identify the demand of the question.

The question checks python handling through a fresh CUET-style MCQ where close distractors are used to test exact conceptual clarity.

Step 2: Apply the correct rule or principle.

The b in rb denotes binary mode and r denotes reading.

Step 3: Eliminate the incorrect options.

(A): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

(B): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

(D): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

Step 4: Verify the answer.

The correct option is **(C)** because it directly satisfies the requirement stated in the question, while the other choices either perform another operation or describe an unrelated idea.

Final Answer:

(C) rb

Answer: (C)

Q39.

Solution

Concept: Python Handling – The with statement manages the file context and closes the file automatically.

Solution:

Step 1: Identify the demand of the question.

The question checks python handling through a fresh CUET-style MCQ where close distractors are used to test exact conceptual clarity.

Step 2: Apply the correct rule or principle.

The with statement manages the file context and closes the file automatically.

Step 3: Eliminate the incorrect options.

(A): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

(C): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

(D): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

Step 4: Verify the answer.

The correct option is **(B)** because it directly satisfies the requirement stated in the question, while the other choices either perform another operation or describe an unrelated idea.

Final Answer:

(B) with open('data.txt','r') as f:

Answer: (B)

Q40.

Solution

Concept: Python Handling – pickle.dump(obj, file) serializes and writes the object into a binary file.

Solution:

Step 1: Identify the demand of the question.

The question checks python handling through a fresh CUET-style MCQ where close distractors are used to test exact conceptual clarity.

Step 2: Apply the correct rule or principle.

pickle.dump(obj, file) serializes and writes the object into a binary file.

Step 3: Eliminate the incorrect options.

(A): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

(B): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

(C): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

Step 4: Verify the answer.

The correct option is **(D)** because it directly satisfies the requirement stated in the question, while the other choices either perform another operation or describe an unrelated idea.

Final Answer:

(D) pickle.dump()

Answer: (D)

Q41.

Solution

Concept: Python Handling – pickle.load(file) deserializes and returns an object from a binary file.

Solution:

Step 1: Identify the demand of the question.

The question checks python handling through a fresh CUET-style MCQ where close distractors are used to test exact conceptual clarity.

Step 2: Apply the correct rule or principle.

pickle.load(file) deserializes and returns an object from a binary file.

Step 3: Eliminate the incorrect options.

(A): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

(C): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

(D): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

Step 4: Verify the answer.

The correct option is **(B)** because it directly satisfies the requirement stated in the question, while the other choices either perform another operation or describe an unrelated idea.

Final Answer:

(B) pickle.load()

Answer: (B)

Q42.

Solution

Concept: Python Handling – Append mode a writes new data at the end of the file.

Solution:

Step 1: Identify the demand of the question.

The question checks python handling through a fresh CUET-style MCQ where close distractors are used to test exact conceptual clarity.

Step 2: Apply the correct rule or principle.

Append mode a writes new data at the end of the file.

Step 3: Eliminate the incorrect options.

(B): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

(C): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

(D): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

Step 4: Verify the answer.

The correct option is **(A)** because it directly satisfies the requirement stated in the question, while the other choices either perform another operation or describe an unrelated idea.

Final Answer:

(A) a

Answer: (A)

Q43.

Solution

Concept: Python Handling – tell() returns the current position of the file pointer.

Solution:

Step 1: Identify the demand of the question.

The question checks python handling through a fresh CUET-style MCQ where close distractors are used to test exact conceptual clarity.

Step 2: Apply the correct rule or principle.

tell() returns the current position of the file pointer.

Step 3: Eliminate the incorrect options.

(A): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

(B): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

(D): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

Step 4: Verify the answer.

The correct option is **(C)** because it directly satisfies the requirement stated in the question, while the other choices either perform another operation or describe an unrelated idea.

Final Answer:

(C) Current file pointer position

Answer: (C)

Q44.

Solution

Concept: Data Communication and Security – Packet switching breaks data into packets that can be routed independently.

Solution:

Step 1: Identify the demand of the question.

The question checks data communication and security through a fresh CUET-style MCQ where close distractors are used to test exact conceptual clarity.

Step 2: Apply the correct rule or principle.

Packet switching breaks data into packets that can be routed independently.

Step 3: Eliminate the incorrect options.

(A): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

(B): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

(C): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

Step 4: Verify the answer.

The correct option is **(D)** because it directly satisfies the requirement stated in the question, while the other choices either perform another operation or describe an unrelated idea.

Final Answer:

(D) Packet switching

Answer: (D)

Q45.

Solution

Concept: Data Communication and Security – SMTP is the Simple Mail Transfer Protocol used for sending email.

Solution:

Step 1: Identify the demand of the question.

The question checks data communication and security through a fresh CUET-style MCQ where close distractors are used to test exact conceptual clarity.

Step 2: Apply the correct rule or principle.

SMTP is the Simple Mail Transfer Protocol used for sending email.

Step 3: Eliminate the incorrect options.

(A): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

(C): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

(D): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

Step 4: Verify the answer.

The correct option is **(B)** because it directly satisfies the requirement stated in the question, while the other choices either perform another operation or describe an unrelated idea.

Final Answer:

(B) SMTP

Answer: (B)

Q46.

Solution

Concept: Data Communication and Security – DNS maps human-readable domain names to IP addresses.

Solution:

Step 1: Identify the demand of the question.

The question checks data communication and security through a fresh CUET-style MCQ where close distractors are used to test exact conceptual clarity.

Step 2: Apply the correct rule or principle.

DNS maps human-readable domain names to IP addresses.

Step 3: Eliminate the incorrect options.

(B): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

(C): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

(D): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

Step 4: Verify the answer.

The correct option is **(A)** because it directly satisfies the requirement stated in the question, while the other choices either perform another operation or describe an unrelated idea.

Final Answer:

(A) DNS

Answer: (A)

Q47.

Solution

Concept: Data Communication and Security – Full-duplex supports sending and receiving at the same time.

Solution:

Step 1: Identify the demand of the question.

The question checks data communication and security through a fresh CUET-style MCQ where close distractors are used to test exact conceptual clarity.

Step 2: Apply the correct rule or principle.

Full-duplex supports sending and receiving at the same time.

Step 3: Eliminate the incorrect options.

(A): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

(B): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

(D): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

Step 4: Verify the answer.

The correct option is **(C)** because it directly satisfies the requirement stated in the question, while the other choices either perform another operation or describe an unrelated idea.

Final Answer:

(C) Full-duplex

Answer: (C)

Q48.

Solution

Concept: Data Communication and Security – A worm is self-replicating malware that can spread independently across networks.

Solution:

Step 1: Identify the demand of the question.

The question checks data communication and security through a fresh CUET-style MCQ where close distractors are used to test exact conceptual clarity.

Step 2: Apply the correct rule or principle.

A worm is self-replicating malware that can spread independently across networks.

Step 3: Eliminate the incorrect options.

(A): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

(C): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

(D): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

Step 4: Verify the answer.

The correct option is **(B)** because it directly satisfies the requirement stated in the question, while the other choices either perform another operation or describe an unrelated idea.

Final Answer:

(B) Worm

Answer: (B)

Q49.

Solution

Concept: Data Communication and Security – Phishing tricks users into revealing sensitive information such as passwords.

Solution:

Step 1: Identify the demand of the question.

The question checks data communication and security through a fresh CUET-style MCQ where close distractors are used to test exact conceptual clarity.

Step 2: Apply the correct rule or principle.

Phishing tricks users into revealing sensitive information such as passwords.

Step 3: Eliminate the incorrect options.

(A): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

(B): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

(C): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

Step 4: Verify the answer.

The correct option is **(D)** because it directly satisfies the requirement stated in the question, while the other choices either perform another operation or describe an unrelated idea.

Final Answer:

(D) Phishing

Answer: (D)

Q50.

Solution

Concept: Data Communication and Security – Confidentiality protects information from unauthorized disclosure.

Solution:

Step 1: Identify the demand of the question.

The question checks data communication and security through a fresh CUET-style MCQ where close distractors are used to test exact conceptual clarity.

Step 2: Apply the correct rule or principle.

Confidentiality protects information from unauthorized disclosure.

Step 3: Eliminate the incorrect options.

(B): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

(C): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

(D): This option does not match the exact requirement because it represents a different concept, command, or behavior in this context.

Step 4: Verify the answer.

The correct option is **(A)** because it directly satisfies the requirement stated in the question, while the other choices either perform another operation or describe an unrelated idea.

Final Answer:

(A) Confidentiality

Answer: (A)

Answer Key

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