

Q 10. If you are using Bubble sort for sorting the given numbers in ascending order, then find out the number of swappings needed.

10, 14, 8, 5, 11, 1, 7

- Ops:
- A. 14
 - B. 10
 - C. 15
 - D. 12

Reset

Q 09. Evaluate the given postfix expression.

$2\ 3\ +\ 5\ *\ 2\ 3\ +\ 4\ +\ *$

- Ops:**
- A. 200
 - B. 210
 - C. 225
 - D. 220



Reset

Q 01. If the base address of a two dimensional array $A[10][20]$ is 100, then find out the address of an element $A[2][6]$ in the array.

**Assume 4 words per memory cell and elements are arranged in row major order.

- Ops:
- A. 245
 - B. 284
 - C. 286
 - D. 278

[Reset](#)



Q 02. If you are using Bubble sort for sorting the given numbers in ascending order, then find out the number of swappings needed.

2, 9, 3, 6, 8, 1, 5

- Ops:
- A. 11
 - B. 12
 - C. 10
 - D. 13

[Reset](#)

Q 03. If the base address of a two dimensional array $A[70][10]$ is 600, then find out the address of an element $A[2][7]$ in the array. **Assume 4 words per memory cell and elements are arranged in column major order.

- Ops:
- A. 2658
 - B. 2345
 - C. 2543
 - D. 2568

[Reset](#)

Q 04. Evaluate the given postfix expression.

10 5 4 2 + 5 * + 3 + *

- Ops:
- A. 320
 - B. 220
 - C. 380
 - D. 280

[Reset](#)

Q 05. If we draw a binary search tree by inserting the given numbers from left to right, then which of the following would come on level 3 of the BST?

2, 1, 17, 34, 16, 5

- Ops:
- A. 34
 - B. 5
 - C. 16
 - D. 1

[Reset](#)

Q 06. Find out the sum of the degree of vertices in the pseudograph as shown in the image.



- Ops:
- A. 11
 - B. 5
 - C. 9
 - D. 10

[Reset](#)

Q 07. Match the given data structures with their memory allocation type.

Data Structures

- 1. Arrays
- 2. Linked Lists

Memory is allocated from:

- A. Stack
- B. Heap

- Ops:
- A. 1-B, 2-A
 - B. 1-A, 2-A
 - C. 1-B, 2-B
 - D. 1-A, 2-B

Q 08. Find out the maximum number of nodes present in a binary tree of height 5.

- Ops: A. 32
B. 16
C. 31
D. 15

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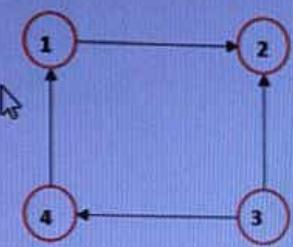
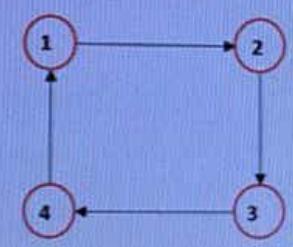
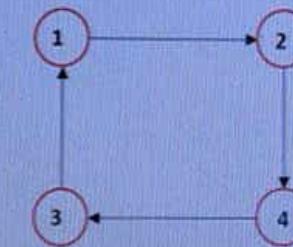


- Ops: A. 11
B. 6
C. 12
D. 8

Reset

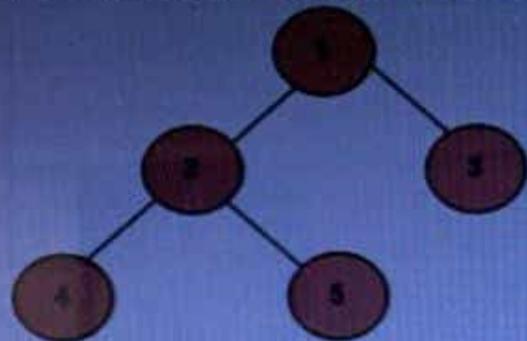
$$\begin{bmatrix} 0 & 1 & 0 & 0 \\ 0 & 0 & 0 & 0 \\ 0 & 1 & 0 & 1 \\ 1 & 0 & 0 & 0 \end{bmatrix}$$

Ops:

- A. 
- B. 
- C. 
- D. 

Submit

Q 07. Which of the following is the correct postorder traversal of the given tree?



- Ops:
- A. 4 5 2 3 1
 - B. 2 3 4 5
 - C. 1 2 4 5 3
 - D. 4 2 5 1 3

[Reset](#)

Q 08. Which of the following statements is/are correct for a priority queue?

- 1. An element with high priority is dequeued before an element with low priority
- 2. If two elements have the same priority, they are served according to their order in the queue
- 3. If two elements have the same priority, they can be served in any random order

- Ops:
- A. Only 1
 - B. 1 and 2
 - C. Only 3
 - D. Only 2

Q 09. Linked lists are used to implement -

- 1. Stack
- 2. Queue
- 3. Trees

Ops: A. All 1, 2, and 3

- B. 2 and 3
- C. 1 and 2
- D. 1 and 3

[Reset](#)

Q 10. Which of the following data structures is non-linear?

Ops: A. Linked List

B. Array

C. Graph

D. Stack

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- B. Heap

Ops: A. 1-A, 2-B
B. 1-B, 2-B
C. 1-A, 2-A
D. 1-B, 2-A

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Q 02. Which of the following data structures is non-linear?

Ops: A. Stack
B. Linked List
C. Array
D. Graph

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Q 03. Find out the sum of the degree of vertices in the pseudograph as shown in the image.



- Ops:
- A. 12
 - B. 6
 - C. 8
 - D. 11

[Reset](#)

Q 04. In a min heap, the left child is located at -

- Ops:
- A. $k/2$ index
 - B. 2^*k index
 - C. $(k+1)/2$ index
 - D. 2^*k+1 . index

[Reset](#)

Q 07. Evaluate the given postfix expression.

10 5 4 2 + 5 * + 3 + *

- Ops:**
- A. 220
 - B. 280
 - C. 380
 - D. 320

[Reset](#)

Q 08. Find out the array representation of the given max heap, if the value 20 is deleted from it. 22, 21, 20, 19

- Ops:**
- A. 21, 19, 22
 - B. 19, 21, 22
 - C. 21, 22, 19
 - D. 22, 21, 19

[Reset](#)

Q 09. If the base address of a two dimensional array A[10][20] is 100, then find out the address of an element A[2][6] in the array.

**Assume 4 words per memory cell and elements are arranged in row major order.

- Ops:
- A. 284
 - B. 245
 - C. 286
 - D. 278

[Reset](#)

Q 10. If the base address of a two-dimensional array A[30][50] is 500, then find out the address of an element A[5][10] in an array.

**Assume 4 words per memory cell and elements arranged in row-major order.

- Ops:
- A. 1540
 - B. 1160
 - C. 1189
 - D. 1124

[Reset](#)

Q 01. If the base address of a two dimensional array $A[70][10]$ is 600, then find out the address of an element $A[2][7]$ in the array. **Assume 4 words per memory cell and elements are arranged in column major order.

- Ops:
- A. 2568
 - B. 2345
 - C. 2658
 - D. 2543

Reset

Q 02. Find out the array representation of the given min heap, if the value 2 is deleted from it.

1, 2, 3, 4

- Ops:
- A. 1, 4, 3
 - B. 4, 3, 1
 - C. 3, 4, 1
 - D. 1, 3, 4

Reset

Q 01. Which of the following statements is **incorrect** for Linked List data structure?

- Ops:
- A. Memory allocation from Heap
 - B. It occupies more memory than array
 - C. Size is not fixed
 - D. Memory allocation from stack

Reset



Q 02. Find out the sum of the degree of vertices in the pseudograph as shown in the image.



- Ops:
- A. 9
 - B. 10
 - C. 11
 - D. 5

Q 05. Which of the following data structures is non-linear?

Ops: A. Array

B. Stack

C. Linked List

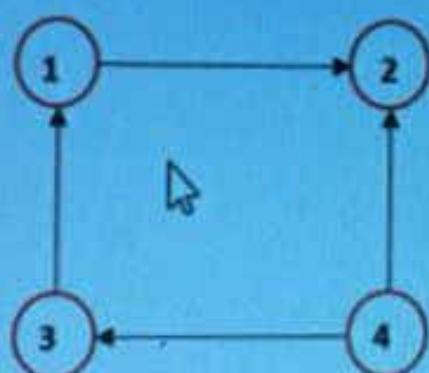
D. Graph 

Reset

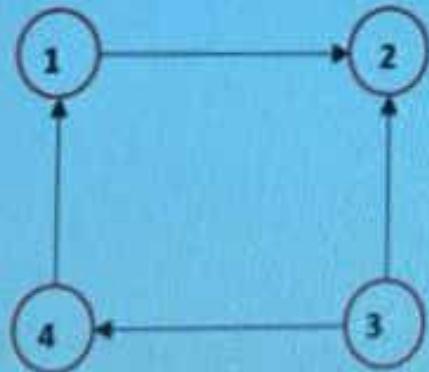
Q 06. From the given adjacency matrix find out the correct directed graph.

$$\begin{bmatrix} 0 & 1 & 0 & 0 \\ 0 & 0 & 0 & 0 \\ 0 & 1 & 0 & 1 \\ 1 & 0 & 0 & 0 \end{bmatrix}$$

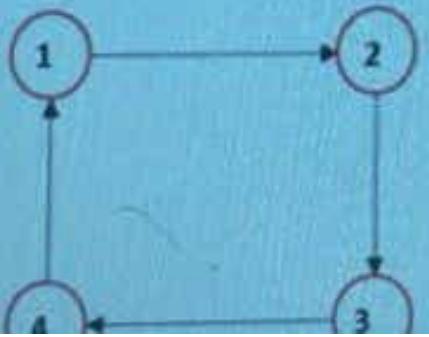
Ops: A.



B.



C.



D. 1, 3, 4

Reset

Q 03. If the base address of a two dimensional array $A[10][20]$ is 100, then find out the address of an element $A[2][6]$ in the array.

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- Ops:** A. 284
B. 278
C. 286
D. 245

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$$\begin{bmatrix} 0 & 1 & 0 & 0 \\ 0 & 0 & 0 & 0 \\ 0 & 1 & 0 & 1 \\ 1 & 0 & 0 & 0 \end{bmatrix}$$

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- Ops:
- A. 21, 22, 19
 - B. 19, 21, 22
 - C. 22, 21, 19
 - D. 21, 19, 22

 Reset

Q 06. Match the given data structures with their memory allocation type.

Data Structures

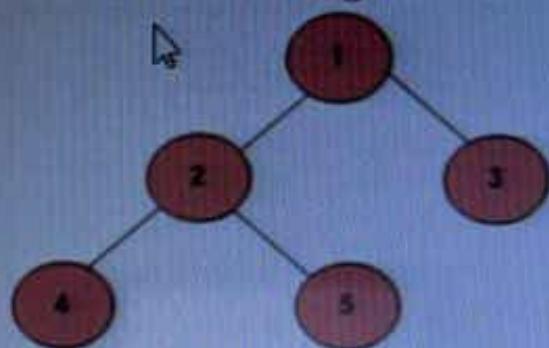
- 1. Arrays
- 2. Linked Lists

Memory is allocated from:

- A. Stack
- B. Heap

- Ops:
- A. 1-B, 2-A
 - B. 1-A, 2-B
 - C. 1-B, 2-B
 - D. 1-A, 2-A

Q 05. Which of the following is the correct postorder traversal of the given tree?



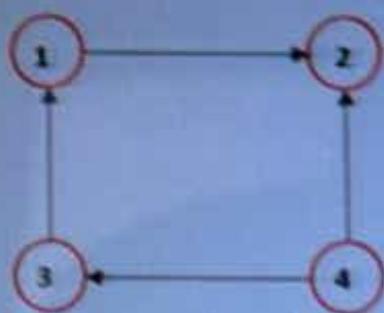
- Ops:
- A. 45231
 - B. 12453
 - C. 12345
 - D. 42513

Reset

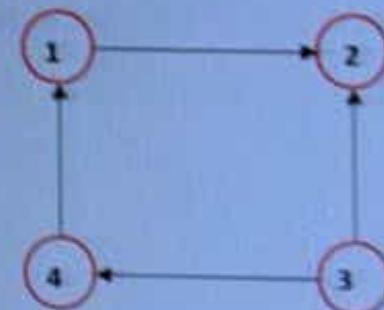
Ques. From the given adjacency matrix find out the correct directed graph.

$$\begin{bmatrix} 0 & 1 & 0 & 0 \\ 0 & 0 & 0 & 0 \\ 0 & 1 & 0 & 1 \\ 1 & 0 & 0 & 0 \end{bmatrix}$$

Ops: A.



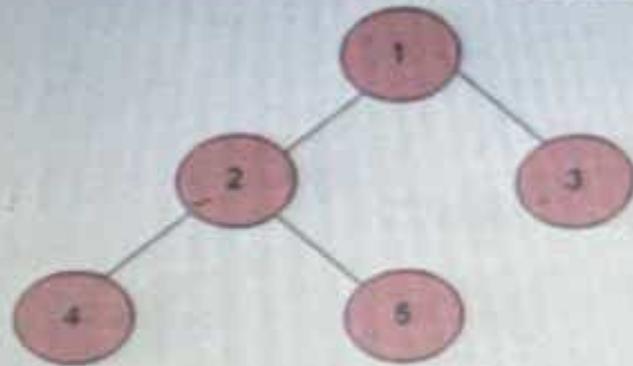
B.



C.



Q 04. Which of the following is the correct postorder traversal of the given tree?



- Ops:
- A. ○ 1 2 3 4 5
 - B. ● 4 5 2 3 1
 - C. ○ 4 2 5 1 3
 - D. ○ 1 2 4 5 3

Reset

Q 05. Which of the following statements is **incorrect** for Linked List data structure?

- Ops:
- A. It occupies more memory than array
 - B. Memory allocation from stack
 - C. Memory allocation from Heap
 - D. Size is not fixed

Reset

Q 06. Find out the array representation of the given min heap, if the value 2 is deleted from it.

1, 2, 3, 4

- Ops:
- A. 4, 3, 1
 - B. 1, 4, 3
 - C. 1, ~~2~~, 4
 - D. 3, 4, 1

Reset

Q 07. Evaluate the given postfix expression.

10 5 4 2 + 5 * + 3 + *

Ops: A. 280

B. 380

C. 220

D. 320

Reset

Q 08. If we draw a binary search tree by inserting the given numbers from left to right, then what would be the height of the BST?

1, 4, 3, 5, 7, 9

- Ops:
- A.
 - B.
 - C.
 - D.

Reset

Q 09. If you are using Bubble sort for sorting the given numbers in ascending order, then find out the number of swappings needed.

2, 9, 3, 6, 8, 1, 5

- Ops:
- A.
 - B.
 - C.
 - D.

Reset

Q 03. In a min heap, the left child is located at -

- Ops:
- A. $k/2$ index
 - B. $2*k$ index
 - C. $2*k+1$. index
 - D. $(k+1)/2$ index

Reset

Q 04. In a priority queue, if two elements have the same priority, then how should they be served?

- 1. According to their order in the queue
- 2. According to a random selection

- Ops:
- A. Both 1 and 2
 - B. Only 1
 - C. Neither 1 nor 2
 - D. Only 2

Reset

Q 01. Find out the maximum number of nodes present in a binary tree of height 5.

- Ops:
- A. 32
 - B. 31
 - C. 16
 - D. 15

[Reset](#)

Q 02. Find out the sum of the degree of vertices in the pseudograph as shown in the image.



- Ops:
- A. 10
 - B. 5
 - C. 11
 - D. 9

[Reset](#)

Q 09. If we draw a binary search tree by inserting the given numbers from left to right, then which of the following would come on level 3 of the BST?

2, 1, 17, 34, 16, 5

Ops: A. 34

B. 5

C. 1

D. 16

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Q 10. If the base address of a two dimensional array $A[10][20]$ is 100, then find out the address of an element $A[2][6]$ in the array.

**Assume 4 words per memory cell and elements are arranged in row major order.

Ops: A. 245

B. 278

C. 286

D. 284

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Q 07. If you are using Bubble sort for sorting the given numbers in ascending order, then find out the number of swappings needed.

10, 14, 8, 5, 11, 1, 7

- Ops:**
- A.
 - B. 15
 - C. 10
 - D. 14

Reset



Q 08. If you are using bubble sort for sorting the given numbers in ascending order, then find out the number of swaps required.

9, 23, 8, 10, 32, 6, 14

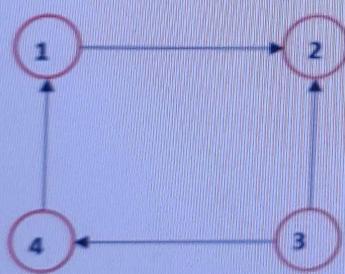
- Ops:**
- A. 10
 - B. 12
 - C. 11
 - D. 9

Reset

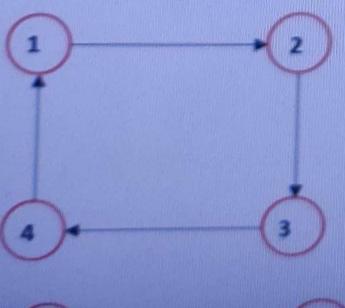
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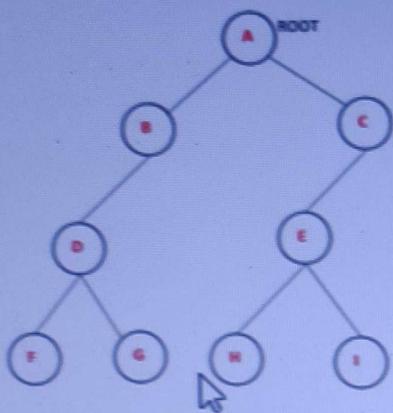
Ops: A.



B.



Q 01. During an in-order traversal of the given rooted tree find out the correct order of the nodes visited ?



- Ops:
- A. F-D-G-B-A-H-I-E-C
 - B. F-G-D-B-A-H-I-E-C
 - C. F-D-B-A-G-H-E-C-I
 - D. F-D-G-B-A-H-E-I-C

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Q 02. Which of the following data structures is non-linear?

- Ops:
- A. Graph
 - B. Stack
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- Ops:
- A. 15
 - B. 32
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Reset

Q 04. In the given Max Heap, find out the parent value of 10.

A

1	2	3	4	5	6	7	8	9	10
70	60	40	45	50	29	16	10	9	35

- Ops:
- A. 60
 - B. 45
 - C. 50
 - D. 40



Reset

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- Ops:
- A. 5
 - B. 10
 - C. 11

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- Ops: A. 21, 19, 22
B. 19, 21, 22
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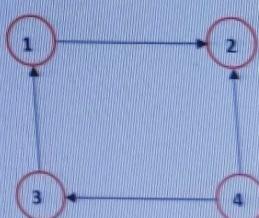
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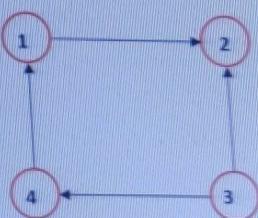
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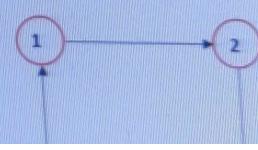
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Memory is allocated from:

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Ops: A. 1-A, 2-B
B. 1-B, 2-B
C. 1-A, 2-A
D. 1-B, 2-A

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Ops: A. Stack
B. Linked List
C. Array
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- Ops:
- A. 12
 - B. 6
 - C. 8
 - D. 11

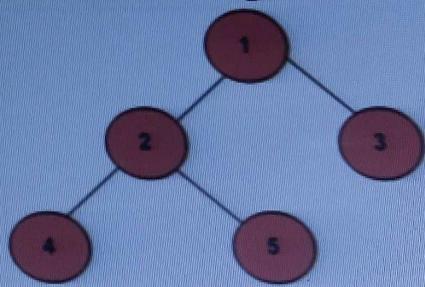
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- Ops:
- A. $k/2$ index
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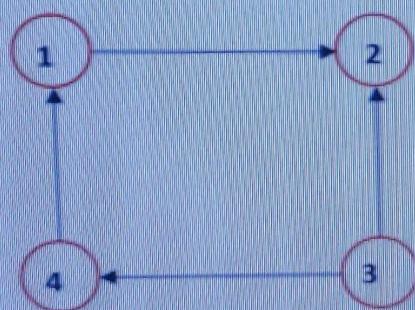
- Ops:
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 - C. 34
 - D. 5

[Reset](#)

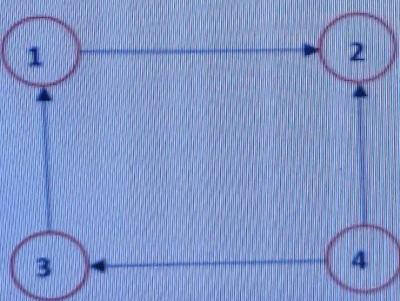
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$$\begin{bmatrix} 0 & 1 & 0 & 0 \\ 0 & 0 & 0 & 0 \\ 0 & 1 & 0 & 1 \\ 1 & 0 & 0 & 0 \end{bmatrix}$$

Ops: A.



B.



Q 07. Evaluate the given postfix expression.

10 5 4 2 + 5 * + 3 + *



- Ops:
- A.
 - B.
 - C.
 - D. 380

Reset

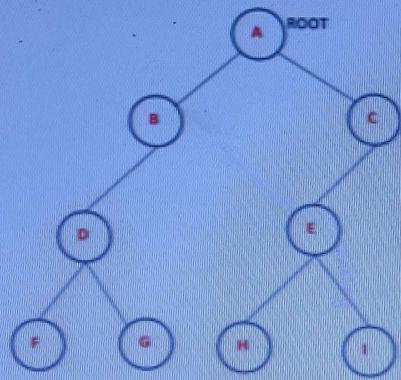
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- A.
 - B.
 - C.
 - D. 15

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Q 03. During an in-order traversal of the given rooted tree find out the correct order of the nodes visited ?



- Ops:**
- A. F-D-G-B-A-H-E-I-C
 - B. F-G-D-B-A-H-I-E-C
 - C. F-D-G-B-A-H-I-E-C
 - D. F-D-B-A-G-H-E-C-I

[Reset](#)

Q 04. Linked lists are used to implement -

- 1. Stack
- 2. Queue
- 3. Trees

Ops:

- A. 1 and 2
- B. All 1, 2, and 3
- C. 1 and 3
- D. 2 and 3

Reset

Q 05. _____ is an appropriate data structure for breadth first search algorithm.

- Ops:
- A. Union find
 - B. Priority queue
 - C. Stack
 - D. Queue



Reset

Q 06. If the base address of a two dimensional array $A[10][20]$ is 100, then find out the address of an element $A[2][6]$ in the array.

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- Ops:
- A. 245
 - B. 286
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- B. Heap

- Ops:
- A. 1-A, 2-A
 - B. 1-A, 2-B
 - C. 1-B, 2-A
 - D. 1-B, 2-B

Reset

Q 02. How many nodes are present in a strictly binary tree with 8 leaves?

- Ops:
- A. 15
 - B. 16
 - C. 7
 - D. 17

Reset