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

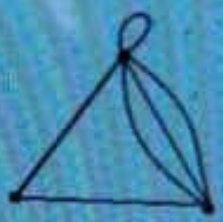
Reset

Q 09. Which of the following statements is **incorrect** for Linked List data structure?

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

Reset

Q 10. Find out the sum of the degree of vertices in the pseudograph as shown in the image.

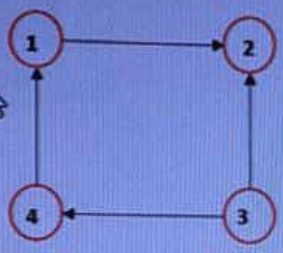


Ops:
A. ○ 11
B. ○ 6
C. ○ 12
D. ◉ 8

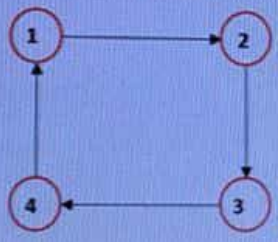
Reset

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

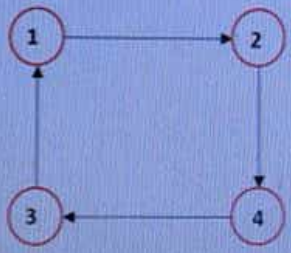
Ops: A.



B.



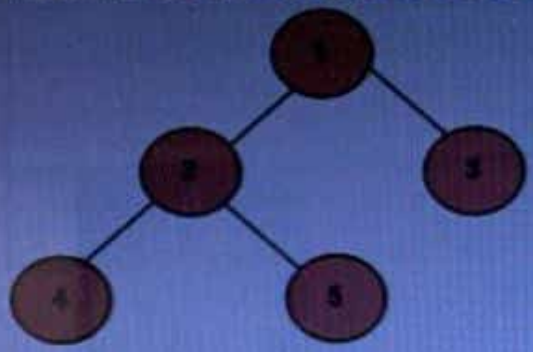
C.



D.

Submit

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



Ops: A. 45231

B. 12345

C. 12453

D. 42513

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

Reset

Q 01. 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-A, 2-B

B. ○ 1-B, 2-B

C. ◉ 1-A, 2-A

D. ○ 1-B, 2-A

Reset

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

Ops: A. ○ Stack

B. ○ Linked List

C. ○ Array

D. ◉ Graph

Reset

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

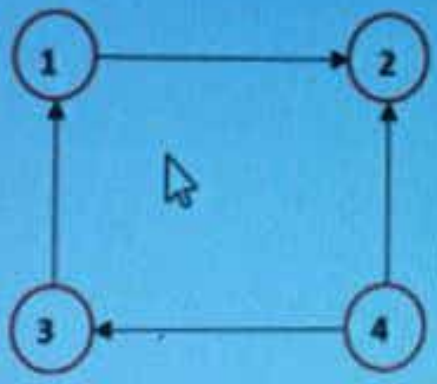
D. ◉ Graph

Reset

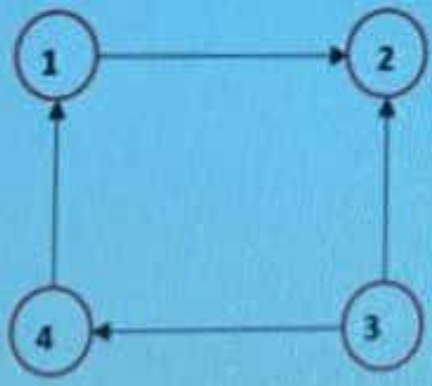
Q 08. From the given adjacency matrix find out the correct directed graph.

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

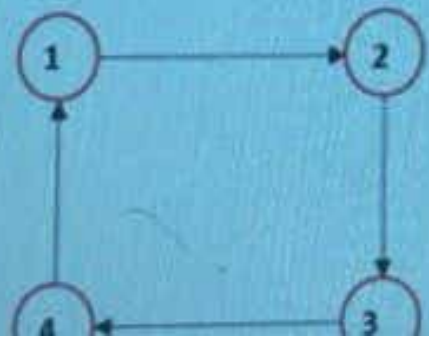
Ops: A.



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 ar 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. ◉ 278

C. ○ 286

D. ○ 245

Reset

Q 04. From the given adjacency matrix find out the correct directed graph.

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

Q 05. 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, 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

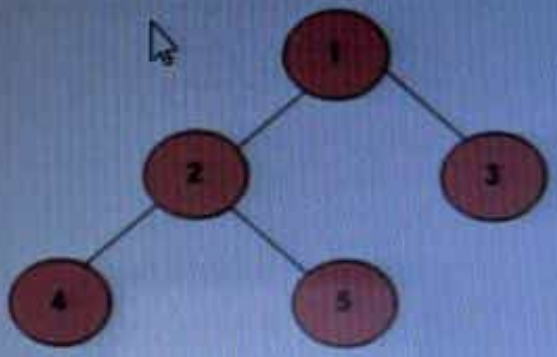
B. Heap

Ops: A. ○ 1-B, 2-A

B. ◉ 1-A, 2-B

C. ○ 1-B, 2-B

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



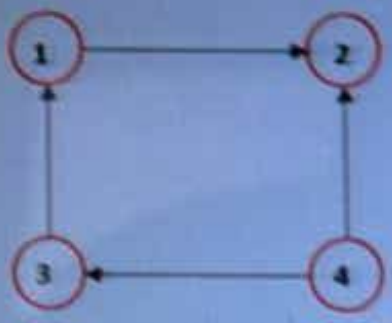
Ops:
A. 45231
B. 12453
C. 12345
D. 42513

Reset

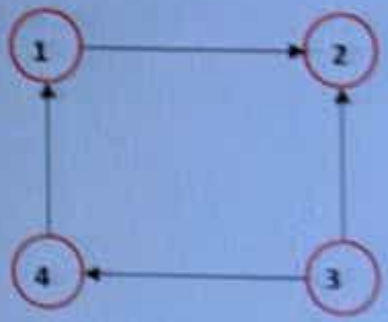
Q ans. From the given adjacency matrix find out the correct directed graph.

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

Ops: A.

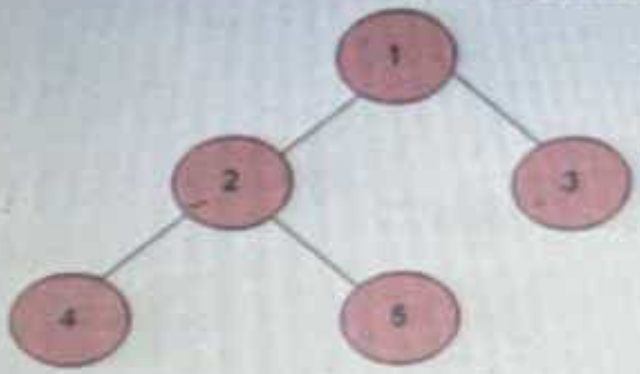


B.



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, 3, 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. ○ 4

B. ◉ 3

C. ○ 5

D. ○ 2

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. ◉ 12

B. ○ 13

C. ○ 11

D. ○ 10

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

Reset

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

Reset

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. ○ 12

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

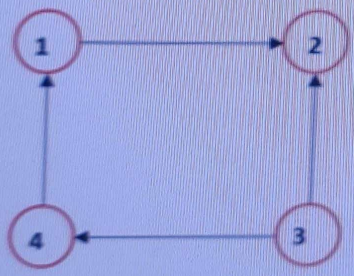
D. ○ 9

Reset

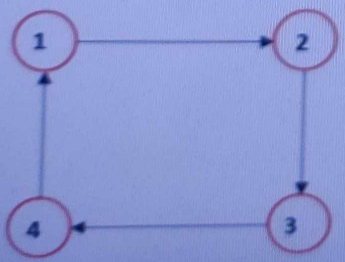
Q 06. From the given adjacency matrix find out the correct directed graph.

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

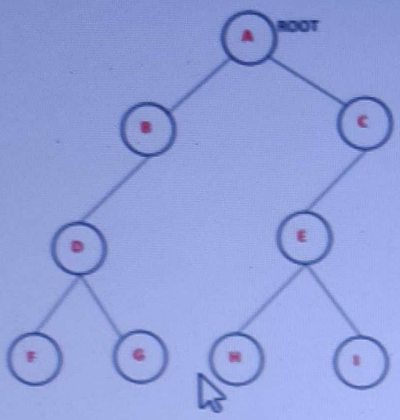
Ops: A.



B.



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

Reset

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

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

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

Ops: A. ◉ Graph

B. ○ Stack

C. ○ Array

D. ○ Linked List

Reset

Q 03. Find out the maximum number of nodes present in a binary tree of height 5.

Ops: A. ○ 15

B. ○ 32

C. ○ 16

D. ◉ 31

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

Q 05. Find out the sum of the degree of vertices in the pseudograph as shown in the image.

Ops:
A. ◉ 5
B. ○ 10
C. ○ 11

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

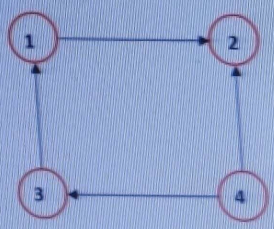
D. ○ 1124

Reset

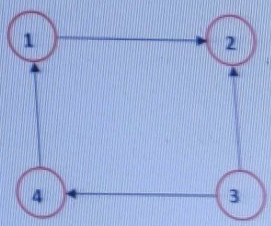
Q 06. From the given adjacency matrix find out the correct directed graph.

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

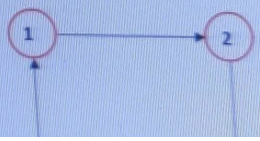
Ops: A. ○



B. ◉



C. ○



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 01. **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-A, 2-B

B. ○ 1-B, 2-B

C. ◉ 1-A, 2-A

D. ○ 1-B, 2-A

Reset

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

Ops:

A. ○ Stack

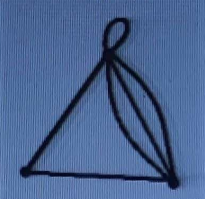
B. ○ Linked List

C. ○ Array

D. ◉ Graph

Reset

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

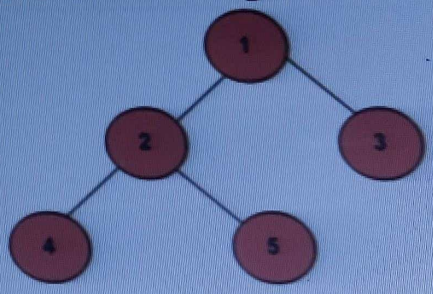
Reset

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



Ops:

A. ◉ 45231

B. ○ 12453

C. ○ 12345

D. ○ 42513

Reset

Q 10. 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. ○ 16

B. ◉ 1

C. ○ 34

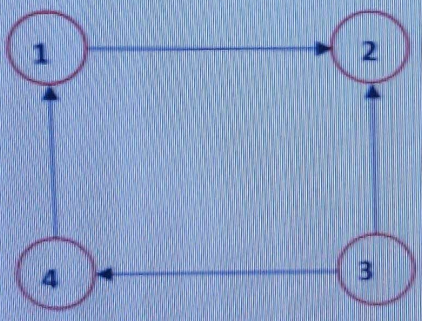
D. ○ 5

Reset

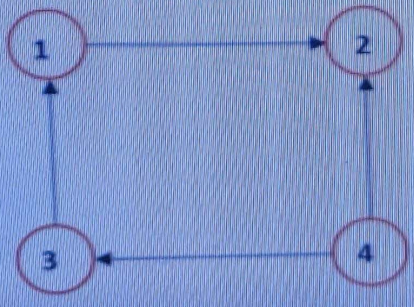
Q 09. From the given adjacency matrix find out the correct directed graph.

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

Ops: A.



B.



Q 07. Evaluate the given postfix expression.

10 5 4 2 + 5 * + 3 + *

Ops:

A. ○ 320

B. ○ 280

C. ○ 220

D. ◉ 380

Reset

Q 08. 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. ○ 12

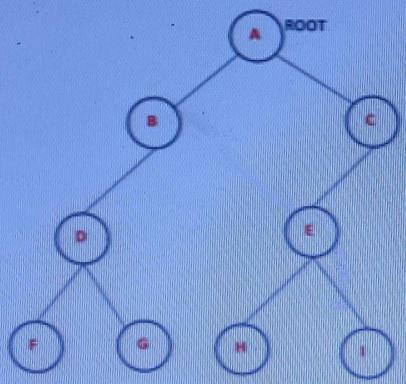
B. ○ 14

C. ○ 10

D. ◉ 15

Reset

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.

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

Ops:

A. ○ 245

B. ○ 286

C. ○ 284

D. ◉ 278

Reset

Q 01. 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-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