Started on	Sunday, 2 April 2023, 7:22 PM
State	Finished
Completed on	Sunday, 2 April 2023, 7:27 PM
Time taken	5 mins 25 secs

Question 1
Complete
Marked out of 1.00

Which of the following is not a data structure

- a. Variable
- b. Record
- c. Dictionary
- d. Array

Question 2
Complete
Marked out of 1.00

Which of the following statement is wrong regarding Python lists and arrays.

- a. Both can be sliced
- b. All statements are correct
- c. A Python array with numbers can be divided by a certain number while doing same on python list will result in Type error.
- d. Both can be indexed and iterated through

Question 3

Complete

Marked out of 1.00

In linked list implementation of queue, if only front pointer is maintained, which of the following operation take worst case linear time?

- a. To empty a queue
- b. Both Insertion and To empty a queue
- c. Insertion
- d. Deletion

Question 4

Complete

Marked out of 1.00

Choose the key advantage of a circular queue:

- a. Effective usage of memory
- b. None of the mentioned
- c. Effective usage of processor
- d. Fast access

Question 5

Complete

Marked out of 1.00

Consider a doubly linked list. A B C D are some arbitrary nodes in this linked list. Below are 3 true statements about them.

- A.next.next.next is B
- C.prev is D
- A.next.next is C

According to the above statements, what is equivalent to **D.next.next.prev** ?

Select one:

- a. C.prev
- b. B.prev
- c. B
- d. A.next

Question 6

Complete

Marked out of 1.00

Which of the following statement(s) is/are correct regarding dictionary data structure.

- a. A dictionary has a set of *keys* and each key has a single associated *value and w*hen presented with a key, the dictionary will return the associated value.
- b. In a dictionary, if the value of a key is null, then search operation on that dictionary will return that key as non-existent.
- c. Dictionaries typically support operations such as testing for existence of a key, inserting elements and deleting elements.
- d. Dictionaries are often implemented as hash tables.

Question 7

Complete

Marked out of 1.00

How many comparisons needed to search a singly linked list of length n for a given element in the worst case,

- a. n/2
- b. 2n
- c. n
- d. Log2 n – 1

Question 8

Complete

Marked out of 1.00

Which of the following statements are correct regarding implementing data structures

- a. A stack can be implemented using a singly linked list with the operations PUSH and POP still taking O(1) time
- b. A stack can be implemented using two queues.
- c. A queue can be implemented using a singly linked list with the operations ENQUEUE and DEQUEUE still taking O(1) time
- d. A queue can be implemented using two stacks.

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◄ Basic Data Structures - Take Home Assignment

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Next activity

In-class lab exercise (In21-S2-CS2023) ►

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Data retention summary

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