Started on	Tuesday, 12 March 2024, 10:20 AM
State	Finished
Completed on	Tuesday, 12 March 2024, 10:24 AM
Time taken	4 mins 35 secs
Grade	**17.00** out of 17.00 (**100**%)

Question **1**

Correct

Mark 1.00 out of 1.00

"Array implementation of Stack is not dynamic", which of the following statements supports this argument?

Select one:

○ 1. user unable to give the input for stack operations

○ 2. All of these

○ 3. a runtime exception halts execution

◉ 4. space allocation for array is fixed and cannot be changed during run-time   ✔ Correct

Correct

The correct answer is: space allocation for array is fixed and cannot be changed during run-time

Question **2**

Correct

Mark 1.00 out of 1.00

The number of moves required to solve the tower of Hanoi with number of disks n = 4 is _____.

○ a. 17

○ b. 9

◉ c. 15   ✔

○ d. 7

○ e. None of these

Your answer is correct.

The correct answer is:
15

Question 3

Correct

Mark 1.00 out of 1.00

Disks piled up one above the other represents a _____.

- ○ a. Queue

- ○ b. Linked List

- ◉ c. Stack ✔

- ○ d. All of these

- ○ e. Array

Your answer is correct.

The correct answer is:
Stack

Question 4

Correct

Mark 1.00 out of 1.00

The function that returns the top element of a stack is:

- ○ a. Pop()

- ◉ b. Peek() ✔

- ○ c. Push()

- ○ d. Empty()

- ○ e. None of these.

Your answer is correct.

The correct answer is:
Peek()

Question 5

Correct

Mark 1.00 out of 1.00

For implementing recursive function the data structure used is _____ .

- ○ a. Array

- ○ b. Tree

- ○ c. Queue

- ○ d. Linked List

- ◉ e. Stack ✔

Your answer is correct.

The correct answer is:
Stack

Which of the following real world scenarios would you associate with a "stack" data structure?

○ a. Offering viva slots based on the priority of the group number

○ b. Students standing in a line at the fee counter

◉ c. Piling up of chairs one above the other in a canteen ✔

○ d. Registering for a cultural event which selects on a first come first serve basis

○ e. None of these

Your answer is correct.

The correct answer is:
Piling up of chairs one above the other in a canteen

Which of the following data structures can be used for parentheses matching?

○ a. Queue

○ b. Linked List

○ c. binary tree

○ d. All of these

◉ e. Stack ✔

Your answer is correct.

The correct answer is:
Stack

Which of the following data structures can be used for implementing a function that converts an integer (in decimal) to binary string?

○ a. Linked List

◉ b. Stack ✔

○ c. binary tree

○ d. Queue

○ e. Array

Your answer is correct.

The correct answer is:
Stack

Which of the following statement(s) is NOT correct?

- ⊙ a. The value at the bottom of the stack is always null
- ⊙ b. All of these are correct
- ⦿ c. Stack is a FIFO data structure   ✔
- ⊙ d. Top of the Stack always contain the new element
- ⊙ e. Stack can be implemented using linked list

Your answer is correct.

The correct answer is:
Stack is a FIFO data structure

Stack is based on _____ concept. (select all the correct ones)

- ☑ a. FILO   ✔
- ☑ b. LIFO   ✔
- ☐ c. FIFO
- ☐ d. LILO

Your answer is correct.

The correct answers are:
LIFO,

FILO

Which of the following is not the application of stack?

- ⊙ a. Reversing the string
- ⊙ b. None of these
- ⊙ c. Evaluating postfix expression
- ⊙ d. Integer to binary conversion
- ⦿ e. Asynchronous Data transfer   ✔

Your answer is correct.

The correct answer is:
Asynchronous Data transfer

Question 12

Correct

Mark 1.00 out of 1.00

Suppose stack contains elements in order 2, 5, 6, 7, 0, 1. How many pop operations should be executed to remove element '6' from the stack?

- ○ a. 0
- ◉ b. 4 ✔
- ○ c. 3
- ○ d. 1
- ○ e. 5

Your answer is correct.

The correct answer is:
4

Question 13

Correct

Mark 1.00 out of 1.00

Which of the following data structure is used to check parenthesis in any expression?

- ◉ a. Stack ✔
- ○ b. Linked List
- ○ c. Priority Queue
- ○ d. Arrays
- ○ e. Queue

Your answer is correct.

The correct answer is:
Stack

Question 14

Correct

Mark 1.00 out of 1.00

Which of the following data structure is used in an "Undo" mechanism of any text editor?

- ○ a. Stack and Queue both
- ○ b. Queue
- ◉ c. Stack ✔
- ○ d. None of these

Your answer is correct.

The correct answer is:
Stack

Consider that the stack is already having one element inserted, now I want to insert a few more elements in it. top points to the topmost element in the stack, newnode refers to the element you want to insert and link refers to the previously inserted element in the stack . The value inserted by the user should be taken as the data for a newnode Which snippet can help you to insert elements at top?

Select one:

○ 1. newnode->data = value; newnode->link = top; top = newnode;   ✔ Correct

○ 2. newnode->data = value; top->link = newnode;

○ 3. newnode->data = value; newnode->link = top;

○ 4. newnode->data = value; newnode->link = top; top = newnode;

Correct

The correct answers are: newnode->data = value; newnode->link = top; top = newnode;, newnode->data = value; newnode->link = top; top = newnode;

Given the following sequence of letters and asterisks: BAL*A*GUR***US***AM*Y*** (a) Consider the stack data structure, supporting two operations push and pop. Suppose that for the above sequence, each letter (such as B) corresponds to a push of that letter onto the stack and each asterisk (*) corresponds a pop operation on the stack. Show the sequence of values returned by the pop operations. (b) Consider the queue data structure, supporting two operations insert and delete. Suppose that for the above sequence, each letter (such as B) corresponds to an insert of that letter into the queue and each asterisk (*) corresponds a delete operation on the queue. Show the sequence of values returned by the delete operations.

Select one:

○ 1. SAMYBALAGURU & GURUSAMYBALA

● 2. YMASURUGALAB & BALAGURUSAMY   ✔

○ 3. BALAGURUSAMY & YMASURUGALAB

○ 4. None

The correct answer is: YMASURUGALAB & BALAGURUSAMY

Which among the given below is not an application of stack?

Select one:

○ 1. Back-tracking

○ 2. undo redo operation

● 3. Job Scheduling   Correct

○ 4. Recursion

Correct

The correct answer is: Job Scheduling