Started on	Tuesday, 3 August 2021, 12:12 PM
State	Finished
Completed on	Tuesday, 3 August 2021, 12:35 PM
Time taken	22 mins 40 secs
Marks	8.00/8.00
Grade	**10.00** out of 10.00 (**100**%)

Question **1**

Correct

Mark 1.00 out of 1.00

Which of the following statement is not related to quickhull algorithm?

Select one:

- a. dividing the subset of points by a triangle
- b. dividing the set of input points by a line
- c. eliminating points within a formed triangle
- d. finding points with minimum and maximum x coordinates
- e. finding the shortest distance between two points ✔

Your answer is correct.

The correct answer is: finding the shortest distance between two points

Correct

Marks for this submission: 1.00/1.00.

Question **2**

Correct

Mark 2.00 out of 2.00

Quicksort is an in-place sorting algorithm. For the given input: **A=[15,31,9,19]**, give the numbers in **A** after completing the **first** partition. Assuming that **A[0]** is the **pivot**.

A = [9 ✔ , 15 ✔ , 31 ✔ , 19 ✔ **]** (Drag and drops numbers in the boxes)

Your answer is correct.

The correct answer is:

Quicksort is an in-place sorting algorithm. For the given input: **A=[15,31,9,19]**, give the numbers in **A** after completing the **first** partition. Assuming that **A[0]** is the **pivot**.

A = [[9], [15], [31], [19] **]** (Drag and drops numbers in the boxes)

Correct

Marks for this submission: 2.00/2.00.

Question **3**

Correct

Mark 2.00 out of 2.00

Given the weights **Wt** = {2, 3, 4, 7}, its values **M** = {70, 80, 90, 200}, and the total weight acceptable **W**=6, for a 0/1 Knapsack problem. Solve this problem using dynamic programming and show the values of the second row (i.e. item number = 1. The first row is for item number = 0) in the necessary table.

Type your answer in the format: $value_1$,$value_2$,..., $value_n$

Answer: 0,0,20,25,25,45,45 ✔

The correct answer is: 0,0,20,25,25,45,45

Correct

Marks for this submission: 2.00/2.00. Accounting for previous tries, this gives **1.33/2.00**.

Comment:
override

Question **4**

Correct

Mark 1.00 out of 1.00

Use divide and conquer to solve the closest pair problem, the time is taken for merging the subproblems is?

Select one:

- a. O(logn)
- b. $O(n^2)$
- c. O(nlogn) ✔
- d. O(n)

Your answer is correct.

The correct answer is: O(nlogn)

Correct

Marks for this submission: 1.00/1.00.

Question **5**

Correct

Mark 1.00 out of 1.00

The dynamic programming algorithm that solves the weighted interval-scheduling problem uses a list **p[]**. **p[j]** is the largest index ***i<j*** such that job **i** is compatible with job **j**. Given jobs and their start-finish time, value in the table below, give the sequence of numbers in **p**. Job indexes are 1, 2, ..., 6.

Start-time	Finish-time	Value
1	2	100
2	5	200
3	6	300
4	8	400
5	9	500
6	10	100

(Your input should follow the format: 012345)

Answer: 011123 ✔

The correct answer is: 011123

Correct

Marks for this submission: 1.00/1.00.

Question **6**

Correct

Mark 1.00 out of 1.00

In this sequence, 11 4 20 45 32 60 98 70, which element seems to be the pivot?

Select one:

- a. 98
- b. 70
- c. 20 ✔
- d. 4

Your answer is correct.

The correct answer is: 20

Correct

Marks for this submission: 1.00/1.00.

◄ Attendance cs330su21-a.sg Thursday 05/08/2021 11:00am-12:40pm

Jump to...

Final Assessment (Friday, August 13) ►