Started on	Wednesday, 31 May 2023, 6:48 PM
State	Finished
Completed on	Wednesday, 31 May 2023, 6:52 PM
Time taken	3 mins 29 secs
Grade	**15.00** out of 15.00 (**100**%)

Question **1**

Correct

Mark 1.00 out of 1.00

The worst case running time of Rabin-Karp algorithm is

Select one:

- a. O((n-m+1)m) ✔
- b. O(n-m)
- c. O(n logm)
- d. O(m)

Your answer is correct.

The correct answer is: O((n-m+1)m)

Question **2**

Correct

Mark 1.00 out of 1.00

In a TRIE model, Strings are represented in the form of "leaf-to-root" paths

Select one:

- True
- False ✔

The correct answer is 'False'.

Question **3**

Correct

Mark 1.00 out of 1.00

If n is the length of text(T) and m is the length of the pattern(P), identify the correct matching algorithm.

Select one:

a. None of the above

b.

```
for s=0 to n-m
                do if p=ts
                        then if P[1..m]=T[s+1..s+m]
                                then print “Pattern occurs with
shift” s
```

✔

c.

```
for s=0 to n
                do if p=t0
                        then if P[1..m]=T[s+1..s+m]
                                then print “Pattern occurs with
shift” s
```

d.

```
for s=0 to n-m
                do if p!=ts
                        then if P[1..m]=T[s+1..s+m]
                                then print “Pattern occurs with
shift” s
```

e.

```
for s=0 to m
                do if p=ts
                        then if P[1..m]=T[s+1..s+m]
                                then print “Pattern occurs with
shift” s
```

Your answer is correct.

The correct answer is:

```
for s=0 to n-m
                do if p=ts
                        then if P[1..m]=T[s+1..s+m]
                                then print “Pattern occurs with
shift” s
```

Question **4**

Correct

Mark 1.00 out of 1.00

How much time does construction of suffix tree take?

Select one:

a. O (log m)

b. Exponential to Length of Tree

c. None of the Above

d. Linear to Length of Tree ✔

e. O(M!)

Your answer is correct.

The correct answer is: Linear to Length of Tree

Question **5**

Correct

Mark 1.00 out of 1.00

Suffix Array can be created in O(n log n) time

Select one:

- True ✔
- False

The correct answer is 'True'.

Question **6**

Correct

Mark 1.00 out of 1.00

Which of the following is NOT a string operation?

Select one:

- a. Substring
- b. Reversal
- c. Sorting ✔
- d. Concatenation

Your answer is correct.

The correct answer is: Sorting

Question **7**

Correct

Mark 1.00 out of 1.00

Bloom filter supports the following Operations

Select one:

- a. Insert, Lookup ✔
- b. Insert, Lookup, Deletion
- c. Deletion Only
- d. Insert Only
- e. Lookup Only

Your answer is correct.

The correct answer is: Insert, Lookup

Question **8**

Correct

Mark 1.00 out of 1.00

Ray tracing tells which object a query Ray intersects (first) in a set of objects in space

Select one:

- True ✔
- False

The correct answer is 'True'.

Question **9**

Correct

Mark 1.00 out of 1.00

Which method uses the concept of stack push and pop to solve convex hull problem?

Select one:

- a. Divide and Conquer
- b. Jarvis march
- c. None of the above
- d. Graham Scan ✔

Your answer is correct.

The correct answer is: Graham Scan

Question **10**

Correct

Mark 1.00 out of 1.00

What is the (EXACT) name of technique that extends common data structures into something that can be applied to the field of computational geometry?

Select one:

- a. None of the above
- b. Geometric algorithmization
- c. Data structure augmentation ✔
- d. Data structure emancipation
- e. Data structure formulation

Your answer is correct.

The correct answer is: Data structure augmentation

Question **11**

Correct

Mark 1.00 out of 1.00

Range trees are used to solve n-dimensional orthogonal space search problems

Select one:

- True ✔
- False

The correct answer is 'True'.

Question **12**

Correct

Mark 1.00 out of 1.00

SELECT ALL THE APPLICABLE ANSWERS to the below question:

The ranges we want to search (for a search query: q - b) in a range tree are located in leaves

Select one or more:

- a. possibly in a ✔
- b. None of the above
- c. possibly in b ✔
- d. in between a & b ✔
- e. outside the range of a & b

Your answer is correct.

The correct answers are: in between a & b, possibly in a, possibly in b

Question **13**

Correct

Mark 1.00 out of 1.00

The trimming of common prefixes in a given range tree ends when a common ancestor is met

Select one:

- True ✔
- False

The correct answer is 'True'.

Question **14**

Correct

Mark 1.00 out of 1.00

"Largest empty circle" within a finite space is can be classified under

Select one:

- a. Static computational problems ✔
- b. Dynamic computational problems
- c. Brute force based computational problems
- d. Augmented computational problems

Your answer is correct.

The correct answer is: Static computational problems

Question **15**

Correct

Mark 1.00 out of 1.00

Neural nets are methods to solve pattern recognition and constraints satisfaction

Select one:

- True ✔
- False

The correct answer is 'True'.

◄ DSA II - Mini Project

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