What is recursion?

What is a greedy algorithm?

Write short notes on:

* a. Divide and conquer
* b. Dynamic programming

What is Dynamic Programming?

Write a recursive algorithm to find the Fibonacci Series up to N terms.

Define divide and conquer approach of problem solving. Write an algorithm that uses divide and conquer approach and explain it with example.

What is Back Tracking algorithm?

What is Divide and Conquer algorithm?

What is the characteristic of a good algorithm?

What is recursive algorithm? Write an recursion algorithm for Tower of Hanoi problem.

Explain about Backtracking algorithm?

Explain Divide and Conquer technique.

What is Greedy algorithm?

What are Randomized algorithms?

What is recursive Algorithm? Explain recursion algorithm for Tower of Hanoi problem.

What is dynamic programming?

Explain Divide and Conquer technique.

What are randomized algorithms?

What is recursive Algorithm? Explain recursion algorithm for Tower of Hanoi problem.

What is the data structure used to perform recursion and why?

Define divide and conquer approach of problem solving with an example.

Write short notes on greedy algorithm. Write and explain an algorithm which uses greedy approach to solve the problem.

What do you mean by divide and conquer algorithm?

Explain Recursion and write a C-program to solve TOH for n number of disks.

Where can we use Divide and Conquer algorithm? Write any two examples?

Explain Recursion and write a C-program to solve TOH for n number of disks

Write an algorithm for Tower of Hanoi (TOH) with 'n' disks. Construct a recursion tree for TOH problem with 4 disks. [3+3]

Illustrate the importance of Huffman algorithm in data communication over the network using the following string. Also generate Huffman code.

BCCAAADDACACBB [6]

Explain how recursion uses stack data structures, use factorial of number calculation to illustrate the concept. [6]

Construct a Huffman code for the given symbols. [6]

Symbol A B C D E F Frequency (in thousands) 35 18 10 10 20 20

Explain merge sort in brief with an algorithm and suitable example.

Explain Quick Sort algorithm. Sort the following elements using Quick Sort.

14, 23, 7, 10, 33, 56, 80, 66, 70

In which case the insertion sort performs better than quick sort? Sort the given set of data using quick sort algorithm: 62, 71, 69, 26, 31, 85, 93, 58, 47, 99

Write an algorithm for quick sort. Sort the following numbers using quick sort: 30,25,79,19,48,28,21,44 and 120. [8]

Explain different types of recursion. Construct a recursion tree for Tower of Hanoi with 3 disks.

What is recursion?

Write a recursive module for the Tower of Hanoi problem.

What are tail and non-tail recursions?

Write an algorithm for TOH with n disks and generate a recursion tree of TOH problem with 3 disks.

How recursive algorithm uses STACK to store intermediate results? Illustrate with an example. Distinguish between normal function and recursive function.

Describe the importance of growth function in algorithm.

Explain how a recursive algorithm uses a stack with a suitable illustrative stack diagram.

Do you think recursive functions are slow? Compare recursive and non-recursive functions. Draw a recursion tree for the Tower of Hanoi assuming 4 disks.

Explain recursion with its disadvantages. Draw the recursive tree diagram for the Fibonacci sequence fib(5).

Explain the basic principles of quick sort and write down its partition algorithm. Compare quick sort and merge sort. Trace the sorting steps in a radix sort algorithm for the following data:

12, 11, 30, 21, 25, 39, 36, 17, 29, 10, 26, 33, 7, 9

What are the types of recursion? Write an algorithm for the Tower of Hanoi (TOH) and illustrate an algorithm for 3 disks.

Explain the statement "A junction or a object calls itself" using the idea behind it. Give a recursive algorithm for Fibonacci series and TOH (tower of Hanoi).