# Dell Technical Round Model Paper

## Section I : Programming

Answer any 5 of the following

1. Write a program that ask for user input from 5 to 9 then calculate the average

2. Implement strcat {} function with out using string function and optimize the function for speed and space

3. Write a function to reverse a linked list

4. Write a recursive function to get the factorial of a given number only if it is prime

5 Write a C++ programme without using any loop {if,for,while etc}to print number form 1 to 1-- and 100 to 1

6. Write a programme to Exchange two number without using a temporary variable

7 Write a function to find if the given number is a power of 2

8. Write a function in 2 different ways that will return f{7} = 4 and f (4) = 7

9. Write a function to remove duplicates in array

10. convert integer number in binary without loops

## Section II -Oops

1. What are the main features of OOPS ? Explain them briefly

2. What is a virtual function ? Explain with an example?

3. What is the difference between overloading and overriding?

4. In inheritance explain the public private protected modifiers behaviors on data members.

5 What is a factory method, give reference to any example class

## Section III : analytical

1..If you have a 5 liter and a 3 liter measuring can, how would you measure exactly 4 liters of liquid?

2  Suppose you had 8 billiard balls, and one of them was slightly heavier, but the only way to tell was by putting it on a scale against another.  What's the fewest number of times you'd have to use the scale to find the heavier ball?

3  a magical pond has one lotus flower in it begin with.  At the end of every day the number of flowers doubles.  It takes 30 days  to fill the complete pond.. How many days will it take to fill half the pond with lotus flowers?

4  In an analog clock how many days each day do both the hour hand and minute hands overlap?

5.. There is a room with a door {closed} and three light bulbs.  Outside the room there are three switches connected to the bulbs.  You may manipulate the switches as you wish, but once you open the door you cant change them.  Identify each switch with its bulb

Technical Interview Questions:

1.  What is composition and aggregation?

2  What is the difference between pointers and references? why?

3.  What is the order of calling of constructors and destructors in class hierarchy? Explain

4.  What is RITI?
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5.  difference between array, vector,list and dequeue?

6.  Explain "Passing by value","passing by pointer" and "passing by reference"?

7.  what is the difference between thread ad a processing are the used?

8.  What is the difference between  heap and stack memory? when are they used?

9.  Implement a algorithm to sort an array?

10. Explain pre-order,post-order and in-order binary tree traversal?

11  What is the difference between char a [] ="string";and char .p ="star";?

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12  What is the difference between union and struct?

13  Explain compling and linking in brief?

14  What is a DLL? Explain a few advantages of using DLL's.

15  What is an interrupt?

16. What is the difference between UDP and TCP protocols?

17. Explain in brief Client Server technology?

18  How will you get the no. of instances created for a class from within the class?

19  What are RAM and ROM also explain difference between them?

20  What is the difference between HTTP GET and HTTP Post?Explain

21.  What is the difference between heap and stack memeory ?