Q1:
A: Write C++ program to read a number and check if it's positive, if it’s so print it, add it to a total, and decrement it by 2 (5 Marks)

B: Write C++ program to read integer and check is prime or not, and write a suitable messages in each case. (5 Marks)

Q2:
A: Write C++ program to find the summation of the following series: (5 Marks)

\[ S = \frac{20}{20x} + \frac{18}{18x} + \frac{16}{16x} + \cdots + \frac{2}{2x} \]

B: Convert condition statement to (if) condition (5 Marks)

```cpp
cout << ( x < y ? x : (x == y ? 0 : y ));
```

Q3:
A: Write C++ program to read two integer numbers, and read the operation to perform on these numbers (5 Marks)

B: Write C++ program to draw the following figure: (5 Marks)

```
*
***
****
```

Q4:
A: Write C++ program, using function, to calculate the squared value of a number passed from main function, use this function in a program to calculate the squares of numbers from 1 to 10. (5 Marks)

B: The Fibonacci Series is: 0, 1, 1, 2, 3, 5, 8, 13, 21, ... It begins with the terms 0 and 1 and has the property that each succeeding term is the sum of the two preceding terms. Write a C++ program, using function, to calculate the nth Fibonacci number. (5 Marks)
Q5:
A: Write a C++ program, using function, to counts uppercase letter in a 20 letters entered by the user in the main program. (5 Marks)

B: Write C++ program, using function, to inverse an integer number: (5 Marks)
For example: 765432    234567

Q6 A: Find the output trace (step by step) (5 Marks)

```cpp
#include<iostream.h>
#include<conio.h>
main()
{
 clrscr();
 int i,j,k;
 for(i=1;i<=9;i+=2)
 {
     for(j=9;j>=i;j-=2)
     cout<<" ";
     for(k=1;k<=i;k++)
     cout<<i;
     cout<<"\n";
 }
 for(i=9;i>=1;i-=2)
 {
     for(j=9;j>=i;j-=2)
     cout<<" ";
     for(k=1;k<=i;k++)
     cout<<i;
     cout<<"\n";
 }
}
```

B: Write complete program in C++ to sort array 2-D in ascending sort. (5 Marks)

Good Luck

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2009/5/