C++ Assignment

Class XIIth Assignment - I

1. WAF to Sort an array of integers in descending order using Bubble Sort
2. WAF to Search an element in array using:
   a. Linear Search
   b. Binary Search
3. WAF to find sum of all the elements of the array
4. Find Output of the following program:

   int val, n = 1000;
   cin>>val;
   res = n + val > 1500 ? 100: 200;
   cout<<res;

   When, input is:
   a. 1000
   b. 200

5. Write the equivalent C++ expressions
   a. $p = 2(l+b)$
   b. $z = 2(p/q)^2$
   c. $s = 1/2mv^2$
   d. $x = \dfrac{-b + \sqrt{(b2 - 4ac)}}{2a}$
6. WAF to find whether a given year is leap year or not
7. WAF to find sum of digits of a given number
8. WAF to take two coordinate points as input and print slope and y-intercept of the line
9. Rewrite the following program after removing syntactical errors, underline each correction:

   # include<iostream.h>
   Void main(){
       const MAX = 0;
       int a, b;
       cin<<a>>b;
       if(a>b)
       MAX = a;
       for(x=0;x<MAX;x++)
       cout<<x;
   }
10. WAP to print first n Fibonacci numbers
11. WAF to get row sum of a matrix
12. WAF to get column sum of a matrix

13. WAF to find whether a given matrix is a diagonal matrix
14. WAF to replace all the spaces in a string with hyphens
15. Find the total number of elements and total size of the following arrays:
    a. int student[20]
    b. float A[4][5]
16. Name the header files associated with the following:
    a. getch()
    b. isdigit()
    c. sqrt()
    d. atoi()
17. What are tokens, explain its types and give examples for each.
18. What are the three steps of using a function? Explain using an example.
19. WAF to take two integers x and n as input and give result:

$$1 + x/2! + x^2/3! + \ldots\ldots\ldots\ldots\ldots\ldots\ldots + x^n/n+1!$$

20. Convert the following as required:
    a. $(84)_{10} = (?)_2$
    b. $(2C9)_{16} = (?)_{10}$
    c. $(101010)_2 = (?)_{10}$
    d. $(3674)_8 = (?)_2$
21. WAF to find multiplication of two matrices
22. WAF to find whether a given string is palindrome or not.
23. What are default arguments? Explain using example. Also give the necessary condition for an argument to be a default argument
24. Express -22 in 1's compliment
25. WAF to calculate the sum of first n natural numbers
26. WAF to find whether a given number is prime or not
27. WAF separate functions to take an integer n as input, n being number of rows to print, and output the following patterns:
    a.   *
         * *
         * * *
         * * * *
         * * * * *
    b.   1
           2 1 2
          3 2 1 2 3
         4 3 2 1 2 3 4
28. What is a preprocessor directive? Explain using example
29. WAF to find all the words of in a string.
30. WAF to find number of consonants and vowels in a string.