

**MIDTERM EXAMINATION**  
Spring 2009 CS201- Introduction to Programming  
**Solved by vuZs Team**  
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<http://groups.google.com/group/vuZs>

**Question No: 1** ( Marks: 1 ) - Please choose one\_\_\_\_\_

There are mainly----- types of software

►Two

►Three

►Four

►Five

Software is categorized into two main categories

o System Software

o Application Software

**Question No: 2** ( Marks: 1 ) - Please choose one\_\_\_\_\_

In C/C++ the #include is called,

►Header file

►Preprocessor Directive

►Statement

►Function

<http://groups.google.com/group/vuZs>

**Question No: 3** ( Marks: 1 ) - Please choose one\_\_\_\_\_

&& is----- operator.

►An arithmetic

►Logical

►Relational

►Unary

we use logical operators ( && and || ) for AND and OR respectively with relational operators.

**Question No: 4** ( Marks: 1 ) - Please choose one\_\_\_\_\_

In flow chart, the symbol used for decision making is,

►Rectangle

►Circle

►Arrow

►Diamond

[http://www.ehow.com/about\\_5081911\\_symbols-used-flowchart.html](http://www.ehow.com/about_5081911_symbols-used-flowchart.html)

**Question No: 5** ( Marks: 1 ) - Please choose one\_\_\_\_\_

The correct syntax of do-while loop is,

- ▶ (condition ) while; do { statements; };
- ▶ { statements; } do-while ();
- ▶ while(condition); do { statements; };
- ▶ **do { statements; } while (condition);**

**Question No: 6** ( Marks: 1 ) - Please choose one\_\_\_\_\_

C++ views each file as a sequential stream of\_\_\_\_\_ .

- ▶ **Bytes**
- ▶ Bits
- ▶ 0's or 1's
- ▶ Words

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**Question No: 7** ( Marks: 1 ) - Please choose one\_\_\_\_\_

If the elements of an array are already sorted then the useful search algorithm is,

- ▶ Linear search
- ▶ **Binary search**
- ▶ Quick search
- ▶ Random search

In binary search algorithm, the 'divide and conquer' strategy is applied.

This applies only to sorted arrays in ascending or descending order.

**Question No: 8** ( Marks: 1 ) - Please choose one\_\_\_\_\_

The address operator (&) can be used with,

- ▶ Statement
- ▶ Expression
- ▶ **Variable**
- ▶ Constant

**Question No: 9** ( Marks: 1 ) - Please choose one\_\_\_\_\_

When a pointer is incremented, it actually jumps the number of memory addresses

- ▶ **According to data type**
- ▶ 1 byte exactly
- ▶ 1 bit exactly
- ▶ A pointer variable can not be incremented

**Question No: 10** ( Marks: 1 ) - Please choose one\_\_\_\_\_

Each pass through a loop is called a/an

- ▶ enumeration
- ▶ **iteration**
- ▶ culmination
- ▶ pass through

**Question No: 11** ( Marks: 1 ) - Please choose one\_\_\_\_\_

Call by reference mechanism should be used in a program when there is

- i. large amount of data to be passed
- ii. small amount of data to be passed
- iii. need to change the passed data
- iv. no need to change the passed data

Choose the appropriate option for the above case.

- ▶ (i) and (ii) only
- ▶ **(i) and (iii) only**
- ▶ (ii) and (iii) only
- ▶ (ii) and (iv) only

**Question No: 12** ( Marks: 1 ) - Please choose one\_\_\_\_\_ <http://groups.google.com/group/vuZs>

Which of the following is the starting index of an array in C++?

- ▶ **0**
- ▶ 1
- ▶ -1
- ▶ any number

**Question No: 13** ( Marks: 1 ) - Please choose one\_\_\_\_\_

The return type of a function that do not return any value must be \_\_\_\_\_

- ▶ int
- ▶ **void**
- ▶ double
- ▶ float

**Question No: 14** ( Marks: 1 ) - Please choose one\_\_\_\_\_

Which of the following is an extension of header file?

- ▶ .exe
- ▶ **.txt**

►.h

►.c

**Question No: 15** ( Marks: 1 ) - Please choose one\_\_\_\_\_

We want to access array in random order which approach is better?

►Pointers

►Array index

►Both pointers and array index are better

►None of the given options.

**Question No: 16** ( Marks: 1 ) - Please choose one\_\_\_\_\_

When we declare a multidimensional array the compiler store the elements of multidimensional array in the form of,

►Columns

►Rows

►Contiguous memory location

►Matrix

**Question No: 17** ( Marks: 1 )\_\_\_\_\_

What is the output of the following program?

```
#include iostream.h
```

```
main () {  
int RollNo;  
int rollno;  
RollNo = 5;  
rollno = 8;  
cout << "Roll No is " << rollno; }
```

Program should not compile due to missing <> from following statement

```
#include iostream.h
```

if we ignore this then output should be

Roll No is 8

**Question No: 18** ( Marks: 1 )\_\_\_\_\_

Why we include **iostream.h** in our programs?

Because standard stream handling function are stored in this file. Before using these function in our program it is necessary to tell compiler about the location of these functions.

**Question No: 19** ( Marks: 2 )

Find out error in the code given below:

```
if ( num % 2 = 0 )
```

```
cout << "The number is even" << endl;
```

if ( num % 2 = 0 ) There should be extra = sign following is right statement

```
if ( num % 2 = =0 )
```

**Question No: 20 ( Marks: 3 )**

How learning to design programs is like learning to play soccer?

"Learning to design programs is like learning to play soccer. A player must learn to trap a ball, to dribble with a ball, to pass, and to shoot a ball. Once the player knows those basic skills, the next goals are to learn to play a position, to play certain strategies, to choose among feasible strategies, and, on occasion, to create variations of a strategy because none fits. "

**Question No: 21 ( Marks: 5 )**

Write the procedure of data insertion in middle of the files by Merge Method practiced in older systems?

- Opened the data file and a new empty file.
- Started reading the data file from beginning of it.
- Kept on copying the read data into the new file until the location we want to insert data into is reached.
- Inserted (appended) new data in the new file.
- Skipped or jumped the data in the data file that is to be overwritten or replaced.
- Copied (appended) the remaining part of the file at the end of the new file

**Question No: 22 ( Marks: 10 )**

Write a recursive function that takes three arguments (an integer array, starting subscript 's' and ending subscript 'e' ).

In first recursive call, the function should display the array from subscript 's' (s = 0) to 'e' (e = size of array). In each successive call, the function should print the array from index s+1 to e. The function should stop processing and return when starting subscript becomes equal to ending subscript.

For example, if user enters values for array 2, 3, 4, 5, 6 then the recursive function must display the following output.

```
2 3 4 5 6
3 4 5 6
4 5 6
5 6
6
```

**answer**

```
#include <iostream.h>
void PrintArray(int arrayInput[], int &s, int &e);
main ( )
{
    int pause;
    int TestArray [6] = {1,2,3,4,5,6};
    int StartPoint = 0;
    int EndPoint = 5;
    PrintArray(TestArray , StartPoint, EndPoint);
    cout<<"\n";
    PrintArray(TestArray , StartPoint, EndPoint);
    cout<<"\n";
    PrintArray(TestArray , StartPoint, EndPoint);
    cout<<"\n";
    PrintArray(TestArray , StartPoint, EndPoint);
    cout<<"\n";
    PrintArray(TestArray , StartPoint, EndPoint);
    cout<<"\n";
    PrintArray(TestArray , StartPoint, EndPoint);
    cin >> pause;
}
void PrintArray(int arrayInput[], int& s, int& e)
{
    for (int i = s; i<= e; i++)
    {
        cout<< arrayInput[i];
    }
    s=s+1;
}
```