

**MIDTERM EXAMINATION**  
**Spring 2009**  
**CS201- Introduction to Programming**

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

A precise sequence of steps to solve a problem is called

- ▶ Statement
- ▶ **Program**
- ▶ Utility
- ▶ Routine

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

The Compiler of C language is written in

- ▶ Java Language
- ▶ UNIX
- ▶ FORTRON Language
- ▶ **C Language**

The C language is so powerful that the compiler of C and other various operating systems are written in C.

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

Initialization of variable at the time of definition is,

- ▶ Must
- ▶ Necessary
- ▶ **Good Programming**
- ▶ None of the given options

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

In if structure the block of statements is executed only,

- ▶ When the condition is false
- ▶ When it contain arithmetic operators
- ▶ When it contain logical operators
- ▶ **When the condition is true**

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

Which of the following function(s) is/are included in **stdlib.h** header file?

- ▶ double atof(const char \*nptr)
- ▶ int atoi(const char \*nptr)
- ▶ char \*strcpy ( char \*s1, const char \*s2)
- ▶ **1 and 2 only**

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

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Dealing with structures and functions passing by reference is the most economical method

- ▶ **True**
- ▶ False

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

Pointer is a variable which store,

- ▶ Data
- ▶ **Memory Address**
- ▶ Data Type
- ▶ Values

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

Preprocessor program perform its function before \_\_\_\_\_ phase takes place.

- ▶ Editing
- ▶ Linking
- ▶ **Compiling**
- ▶ Loading

The C preprocessor modifies a source code file before handing it over to the compiler. You're most likely used to using the preprocessor to include files directly into other files,

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

Which of the following can not be a variable name?

- ▶ area
- ▶ area
- ▶ **10area**
- ▶ area2

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

Which looping process is best, when the number of iterations is known?

- ▶ for
- ▶ **while**
- ▶ do-while
- ▶ all looping processes require that the iterations be known

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

Which character is inserted at the end of string to indicate the end of string?

- ▶ new line
- ▶ tab
- ▶ **null**
- ▶ carriage return

**null** character inserted at the end of the string by C automatically

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**Question No: 12 ( Marks: 1 ) - Please choose one**

How many bytes are occupied by declaring following array of characters?

**char str[] = "programming";**

- ▶ 10
- ▶ 11
- ▶ **12**
- ▶ 13

11 plus one for null char (11+1= 12)

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

Which of the following header file defines the **rand()** function?

- ▶ iostream.h
- ▶ conio.h
- ▶ **stdlib.h**
- ▶ stdio.h

The function is *rand()* and is in the standard library. To access this function, we need to include `<stdlib.h>` library in our program. This function will return a random number. The number can be between 0 and 32767.

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

Commenting the code \_\_\_\_\_

- ▶ **Makes a program easy to understand for others.**
- ▶ Make programs heavy, i.e. more space is needed for executable.
- ▶ Makes it difficult to compile
- ▶ All of the given options.

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

What's wrong with this for loop?

for (int k = 2, k <=12, k++)

- ▶ the increment should always be ++k
- ▶ the variable must always be the letter i when using a for loop
- ▶ there should be a semicolon at the end of the statement
- ▶ **the commas should be semicolons**

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

For which array, the size of the array should be one more than the number of elements in an array?

- ▶ int
- ▶ double
- ▶ float
- ▶ **char**

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

To Which category of the software "Compiler and Interpreter" belongs?

*They belong to system software.*

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There are two type of system software

1. Operating system
2. Language translators.

These are part of language translators

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

What is the result of the expression  $x = 2 + 3 * 4 - 4 / 2$   
**12**

first multiplies  $3*4 = 12$  then Division  $4/2 = 2$   
 $2+12-2 = 12$

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

Write a declaration statement for an array of 10 elements of type float. Include an initialization statement of the first four elements to 1.0, 2.0, 3.0 and 4.0.

**float tmp [10] = {1.0,2.0,3.0,4.0};**

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

Write down the output of the following code?

```
int array[7], sum = 0;
for(int i=0;i<7;i++)
{
    array[i] = i;
    sum+= array[i];
}
cout<< " Sum = " <<sum;
answer: 21
```

Loop will run times starts from zero and add values from 1 to 6 which is equal to  
**21**

**What will be the output of the following segment of C++ code?**

```
int A[5] = {1 , 2, 3, 4};
int i;
for (i=0; i<5; i++)
{
    A[i] = 2*A[i];
    cout << A[i] << " ";
}
2 4 6 8 0
```

Loops will run 5 times as its starting from zero. It will multiply the value of each item in array as last time is not initialized so it will multiply it with zero to give zero as output

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

Write a C++ program that will determine if a departmental store customer has exceeded the credit limit on a charge account.

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Program should input the following facts in five variables

1. Account number
2. Balance at the beginning of month (Beginning balance)
3. total of all items charged by customer this month (charges)
4. total of all credits (credits)
5. allowed credit limit

Calculate the new balance

New balance = Beginning balance + charges – credits

Determine if **new balance** exceeds the **allowed credit limit**. For those customers whose credit limit is exceeded. The program should display the message "Credit Limit exceeded."

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