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CS201 MID Term 2012 & 2011 SOLVED MCQS

(MN. Date 26 , 10am)

Explain the logic of each statement of the given code segment.

```
Streampos orig = aFile.tellp();  
aFile.seekp(0, ios::end);
```

 (05)

Write a program which prompts the user to enter 10 elements of type int and stores them into an array. Program should display only those elements whose indices are divisible by 2.

Hint: Use pointer to display the array elements whose indices are divisible by 2. (05)

Write the code for a structure called Inventory having the following elements:

- A character array named partName
- An integer named partNumber
- An integer named stock.

(03)

Which one of the following is the better approach in terms of memory space occupation and why ?

```
1. char *arr[] = {"programming", "fundamental", "cs201"};  
char arr[3][50] = {"programming", "fundamental", "cs201"};
```

 (03)

Write a statement for opening file `trans.txt` for input; using an `ifstream` object called `inTransaction`. (02)

Write the code to access the element at third row and second column of a 2D array uses pointer named `arrayptr`. (02)

MCQS

Syntax of a union is identical to _____ .

structure

Class

Function

Oop

A union is a user-defined data type that contains only _____ from its list of members at a time.

one object

two objects

three objects

four objects

Which of the given file handling modes are similar in their functionality ?

ios::out, ios::trunc

ios::trunc, ios::ate

ios::trunc, ios::nocreate

ios::trunc, ios::ate

Which one of the given option is not a mode for reading/writing the data from a file?

In

Out

Trunk

Get

In C/C++, the header file used for string manipulation is _____.

stdlib.h

string.h

strings.h

stype.h

A 2D array multi[5][10] can be accessed using the array name as **multi , this technique is called _____.

Single referencing

Single dereferencing

Double referencing

Double dereferencing

C language was evolved from _____ language(s).

BASIC

C++

B and BCPL

FORTRAN

The _____ statement forces the immediate next iteration of the loop.

Switch

Goto

Continue

Break

_____ are very good tools for code reuse.

Operators
Loops
Functions
Variables

When an argument is passed by reference, _____

the function cannot access the argument's value.
a variable is created in the function to hold the argument's value.
a temporary variable is created in the calling program to hold the argument's value.
the function accesses the argument's original value in the calling program.

_____ executes all the lines before error and stops at the line which contains the error.

Interpreter
Compiler
Linker
Debugger

Analysis is the ----- step in designing a program.

Middle
Post design
First
Last

Which of the following is the correct function call, having array named student of 10 elements as a parameter?
addRecord(student[]);
addRecord(student);
addRecord(student[10]);
addRecord(*student);

When an array element is passed to a function, it is passed by _____.

Reference
data type
value
data

What is the correct syntax to declare an array of size 10 of int data type?
int [10] name ;
name[10] int ;
int name[10] ;
int name[] ;

If we want to copy an array, both arrays need to be of same _____.

Elements and size

Data and size

Data type and size

Data and data type

Which of the following is the correct syntax to print multiple values or variables in a single command using cout?

cout << "H" << x << "\n";

cout << "Hello" + x + "\n";

cout << "H", x, "\n";

cout << ("H" & x & "\n");

Which one of the statements given below is equivalent to $x \% = 5$?

$x = \% x 5$

$x = x \% 5$

$x = \% 5$

$x \% x = 5$

The condition in loop should be a(n) _____.

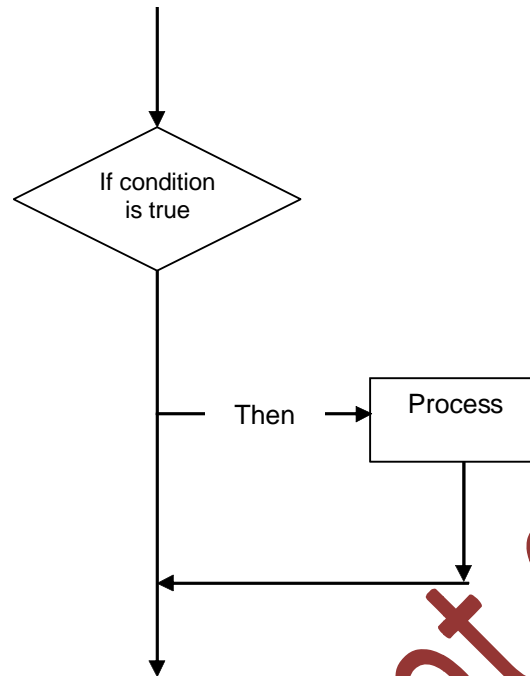
Arithmetic Expression

Constant Expression

Boolean Expression

Primary Expression

Which structure is represented by following flow chart ?



if-else structure
else-if structure
switch structure
if structure

2ND PAPER

Write the code for defining a structure Triangle with variables base, altitude and hypotenuse as the structure members. (05)

Write a code which reads a string not greater than 20 characters from keyboard, stores it in an array and displays it on the screen. (05)

Given below is the code segment of a file handling program. What is the purpose of the condition given in the while loop ?

```
while (!inFile.eof())  
{  
    inFile >> name >> sal >> dept;  
    cout << name << "\t" << sal << "\t" << dept << endl;  
}
```

(03)

Identify the error in the given code segment and explain the reason for error.

```
main()
```

```
{  
  int num1[5] = {5,8,3,6,9};  
  int *ptr;  
  ptr = num1;  
  
  num1++;  
  
  return 0;  
}
```

(03)

Which standard library must be included in a program to perform file read and write operations? (02)

Write down the output of the following code segment?

```
int x[10] = {0,1, 2, 3, 4, 5, 6, 7, 8, 9};  
int *xptr;  
xptr = &x[5];  
cout << *(xptr++) + 1;
```

(02)

MCQS

Stream which sends data to the program is called _____.

Input stream

Output stream

Inline stream

Function stream

Syntax of a union is identical to _____.

Structure

Class

Function

Loop

When accessing a structure member, the identifier to the left of the dot operator is the name of _____.

a structure member

a structure tag

a structure variable

the keyword struct

The parameter passed to isdigit() function is _____.

a character variable

a boolean variable
an integer variable
a character string

TWAIN stands for _____ .
Technology With An Interesting Name
Technology Without An Informative Name
Technology Without An Interesting Name
Technology With An Informative Name

_____ translates high level language program into machine language code.

Compiler
Linker
Debugger
Editor

From the option given below, what will be the correct output of the code?

```
for (int a = 1; a <= 3; a++)  
    cout<<a*3-1<<" ";  
2 4 6  
2 5 8  
no output is displayed  
1 2 3
```

If the return type of a function is void then it means that it will _____.
return any type of data
return some specific type of data
return no data
return just character data

The functions that have already been defined as a part of the language are called _____.
user-defined functions
programmer-defined functions
inner funtions
built-in functions

Given that doubleArray is an array of 7 integers. Which of the below is the correct statement to access the 5th element of the array?
doubleArray[7]

doubleArray[4]

doubleArray{7}

doubleArray(4)

The symbol which is used to represent a process in a flow chart is _____.

Rectangle

Arrow

Oval

Circle

When an array is passed to a function, by default it will be passed by _____.

Data

Reference

Value

Data type

What is the range of Random number generator function rand()?

0 – 32768

1 – 32768

0 – 32767

1 – 32767

The first character of a variable name must be an alphabet or _____.

Underscore

Digit

Special character

Comma

In _____, the first pointer stores the address of the some other pointer, which contains the address of any variable.

single dereference

double dereference

single reference

double reference

Initialization of variable at the time of definition is -----practice.

Bad Programming

Necessary

Good Programming

Not a necessary

Which looping process checks the test condition at the end of the loop?

For

While

do-while

no looping process checks the test condition at the end

You can use a _____ statement to transfer control elsewhere out of the nested structure.

Continue

Goto

Pause

Break

Which of the following array is the most suitable for storing a matrix structure?

Single-dimensional array

Two-dimensional array

Three-dimensional array

Four-dimensional array

Write a C/C++ program which defines an array of 15 elements. This program changes all uppercase letters of an array into lowercase letters and all lowercase letters to uppercase using character handling functions. (05)

Write down the output of following code segment.

```
int num[10] = {2, 3, 5, 8, 9, 10, 12, 15, 19, 20} ;  
int *ptr = num ;
```

```
for (int i=0; i<10; i+=2){  
cout << *(ptr+i) << " ";  
}
```

(05)

What will be the output of given program code?

```
main()  
{  
    char province[] = "Sindh";  
    char s[80];  
  
    strcpy(s, "Hyderabad");  
  
    strcat(s, " and ");
```

```
strcat(s, province);  
  
cout << s;  
  
}
```

(03)

What will be the output of following code segment?

```
void func(int [], int);  
main(){  
int arr[3] = {2, 3, 5} ;  
func(arr, 3) ;  
  
for (int i = 0; i<3; i++)  
cout << arr[i] << "";  
}  
void func(int a[], int size){  
for (int i = 0; i<size; i++)  
a[i] = 2*a[i];  
}
```

(03)

What happens if we open an existing file using the default output mode and write the data into the file ?

(02)

A two-dimensional array has 3 rows and 4 columns. Write down the syntax to initialize first element of all three rows of two-dimensional array with value 2. (02)

The microsoft word document(.doc) is a kind of _____ .

Sequential File

Random Access File

Binary Access File

Executable File

A union is a user-defined data type that contains only _____ from its list of members at a time.

one object

two objects

three objects

four objects

In C/C++, _____ are the doors through which data can enter and come out of a program.

Streams

Fields
Variables
Header files

Which one of the given option is not a mode for reading/writing the data from a file?

In
Out
Trunk
Get

C++ views each file as a sequential stream of _____.

Bits
Bytes
Numbers
Words

In 2D array, the technique used to access the array elements is called _____

Single referencing
Double referencing
Double dereferencing
Single dereferencing

From the options given below, identify the correct option which is used for calling the function float square (int &);

square (int num);
square (&num);
square (num);
square (*num);

Identify the correct option which is used for calling the function float area (int).

area(&num) ;
area(num) ;
area(int num) ;
area(*num) ;

Which kind of error occurs in the code below to access the variable num in the main function?

```
int num =10;
```

```
int main(){  
int x ;  
x = num ;  
}
```

Syntax error

Logical error

Run time error

No error

A program statement that invokes a function is called _____.

function declaration

function call

function definition

function prototype

What will be the output of the following code segment?

```
main(){  
int a = 10 ;  
int b =0;  
int *x = &a;  
b = (*x)+3 ;  
cout << a << " , " << b ;  
}
```

10,0

10,3

10,13

0,13

When the logical operator AND (&&) combines two expressions exp1 and exp2 then the result will be true only _____

When both exp1 and exp2 are true

When both exp1 and exp2 are false

When exp1 is true and exp2 is false

When exp1 is false and exp2 is true

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

- int
- double
- float
- char**

What is the range of Random number generator function rand()?

- 0 – 32768
- 1 – 32768
- 0 – 32767**
- 1 – 32767

To assigned a value to a character type variable, _____ are used around the value.

- parenthesis ()
- single quotes ' '**
- double quotes " "
- curly braces { }

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

- Header file
- Preprocessor Directive**
- Statement
- Function

The number 544.53 must be stored in _____ data type.

- Int
- Short
- Float**
- Char

Use of the _____ statement violates the rules of structured programming.

- Break
- Continue
- Goto**
- Switch

In Flow Chart, flow of control is represented by _____.

- Rectangle
- Circle

Diamond

Arrow

What will be the correct syntax for initialization of pointer *ptr* of type int with variable *x*?

int ptr = &x ;

int ptr = x ;

int *ptr = &x ;

int ptr* = &x ;

Write a program which prompts the user to enter 10 elements of type int and stores them into an array. Program should display only those elements whose indices are divisible by 2.

Hint: Use pointer to display the array elements whose indices are divisible by 2. (05)

Write the code for a structure called Inventory having the following elements:

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(03)

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MCQS

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Function
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2nd paper

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 (02)

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- Function
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do-while
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Continue
Goto
Pause
Break

Which of the following array is the most suitable for storing a matrix structure?

Single-dimensional array

Two-dimensional array

Three-dimensional array

Four-dimensional array

QUESTION:

Write down the output of the code given below?

```
#include <iostream>
using namespace std;

union Num
{
    int    ValueI;
    float  ValueF;
    double ValueD;
    char   ValueC;
};

void main()
{
    // Optional union keyword
    // ValueI = 100
    Num TestVal = {100};

    cout<<"\nInteger = "<<TestVal.ValueI<<endl;
    TestVal.ValueF = 2.123;
    cout<<"Float = "<<TestVal.ValueF<<endl;
    cout<<"Uninitialized double = "<<TestVal.ValueD<<endl;
    cout<<"Some rubbish???"<<endl;
    TestVal.ValueC = 'U';
    cout<<"Character = "<<TestVal.ValueC<<endl;
}
```

(05)

Write a program which declares and initializes an array of 10 integers and then displays the 4th and 8th element of the array by using a pointer.

(05)

Perform left shift operation on a binary number 0101 and write the result in binary and decimal.

(03)

Write the code for the declaration of a function named getMax which takes a 2D array of integers(3x3 dimension) as its parameter and returns a double pointer to an integer.

(03)

Identify any logical or syntax error in the statement below and explain the reason of the error.

```
seekg (-10L, ios::beg);
```

(03)

Write the code to access the element at third row and second column of a 2D array uses pointer named arrayptr .

(02)

MCQS:

An object of _____ class can be created for saving the current position of any opened file before reading from the file

Filepos

Streampos

Stream

Filestream

The value returned by the eof() function is of _____ type.

Integer

Float

Character

Boolean

If a file is not properly closed in a program then what is the status of the program ?

Runtime error will be generated in the program

The program will terminate normally

Compiler will generate syntax error

The Program will crash

The parameter passed to isdigit() function is _____.

a character variable

a boolean variable

an integer variable

a character string

In C/C++, the header file used for string manipulation is _____.

- stdlib.h
- string.h
- strings.h
- stype.h

Arrays are best data structures _____.

- they take least space in memory
- for the size of the structure and the data in the structure are constantly changing
- for relatively permanent collections of data
- they take much space in memory

Each array declaration must provide the information about all these things except _____.

- Name of the array
- Type of data stored in the array
- The location of the first element to be stored
- Number of elements of the array

The First step for developing a program is _____.

- Linking
- Debugging
- Analysis
- Loading

_____ transfers the executable code from hard disk to main memory.

- Linker
- Loader
- Editor
- Interpreter

_____ operator is used to pass the address of a variable to the called function.

- *
- **
- &&
- &

In call by reference, _____ of a variable is passed to the called function.

- Address
- Size
- Type
- Value

_____ of a function is also known as signature of a function.

- Definition
- Declaration
- Calling
- Invoking

Preprocessor program performs its function before _____ phase takes place.

- Editing
- Linking
- Compiling
- Loading

Which of the following is the correct function call, having array named student of 10 elements as a parameter?

- addRecord(student[]);
- addRecord(student);
- addRecord(student[10]);
- addRecord(*student);

The remainder (%) operator is a _____ operator.

- Logical
- Arithmetic
- Relational
- Conditional

Which of the following array is the most suitable for storing a matrix structure?

Single-dimensional array

Two-dimensional array

Three-dimensional array

Four-dimensional array

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