**Bahir Dar University**

**Bahir Dar Institute of Technology - Faculty of Computing**

***Model Exam for Fundamental of Programming II (100%)***

**Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Id\_\_\_\_\_\_\_\_\_\_\_ Section\_\_\_\_\_ Time allowed:**

**Part I - Choose the best answer**

1. What is meant by ofstream in c++?
2. Writes to a file
3. Reads from a file
4. Both a & b
5. None
6. Which operator is used to insert the data into file?
7. >>
8. <<
9. <
10. >
11. What is pointer?
12. The variable that stores the value of another variable
13. The variable that stores reference of garbage variable
14. The variable that stores the memory address of another variable
15. A & C Both
16. Which header file is used for reading and writing to a file?
17. iostream
18. fstream
19. stdlib
20. None of the mentioned
21. You have assigned the address of Value to the pointer P, Which statement will display the value stored in Value using pointer P?
22. cout<<P;
23. cout<<\*Value;
24. cout<<&P;
25. cout<<\*P;
26. When the \_\_\_\_\_\_\_\_\_\_\_ is present in front of a variable name, it represents the address of that variable.
27. asterisk ( \* )
28. conditional operator
29. ampersand ( & )
30. semicolon ( ; )
31. In order, the three-step process of using a file in a C++ program involves:
32. Name the file, open the file, and delete the file
33. Insert a diskette, open a file, and remove the diskette
34. Open the file, read/write data, close the file
35. Create the file contents, close the file, and name the file
36. Consider the following snippet code and which statement is legal to use

*flaot y;*

*int x;*

*int \*ip;*

*float \*fp;*

1. *ip =* &*y;*
2. *fp =* &*x;*
3. *ip = &x;*
4. *fp = &y;*
5. *A and B*
6. *C and D*
7. Consider the following snippet code and which statement produce error

*flaot y;*

*int x;*

*void \*p;*

1. *p =* &*y;*
2. *p =* &*x;*
3. *cout<<p;*
4. *cout<<\*p*
5. Which statement is ***true***
   1. An array name is just a pointer that always points to the array’s first element
   2. Assigning an array name without index to pointer is valid
   3. Assigning pointer to an array name without index is invalid
   4. All
   5. None
6. Which statement is ***false***
   1. Structure is a collection of one or more variable types
   2. Structure can be referred using a single name
   3. Structure is user defined data type for grouping variables
   4. All
   5. None
7. What is the output of the following program

*void main()*

*{*

*int num = 100;*

*int \*p;*

*cout<< "num is "<<num<<endl;*

*p = &num;*

*cout<< "\*p is "<<\*p<<endl;*

*\*p = 300;*

*\*p = \*p + 200;*

*cout<< "num is "<<num<<endl;*

*cout<< "\*p is "<<\*p<<endl;*

*getch();*

*}*

* 1. num is 100

\*p is 100

num is 500

\*p is 100

* 1. num is 100

\*p is 100

num is 100

\*p is 500

* 1. num is 100

\*p is 100

num is 100

\*p is 100

* 1. num is 100

\*p is 100

num is 500

\*p is 500

***Consider the following fragment of code for question 13 to 16***

*char name[] = “C++ Programming”;*

1. What is the output of the following code
2. ***cout<<name[0];***
   1. ***C C. C++***
   2. ***C++ Programming D.***
3. What is the output of the following code
4. ***cout<<name;***
   1. ***C C. C++***
   2. ***C++ Programming D.***
5. What is the output of the following code
6. ***cout<<\*name;*** 
   1. ***C C. C++***
   2. ***C++ Programming D.***
7. What is the output of the following code
8. ***cout<<\*(name+3);***
   1. ***C C. C++***
   2. ***C++ Programming D.***
9. \_\_\_\_\_\_\_\_\_\_\_ string manipulation function looks for the first occurrence of a sub-string in another string.
   1. strchr( )
   2. strlwr( )
   3. strstr( )
   4. strupr( )
10. Which one of the following is true statement considering file input/output operations?
    1. If a file object is declared with ofstream class, we can use it for writing and reading to and from a file.
    2. If a file object is declared with ifstream class, we can use it for writing to a file.
    3. If a file object is declared with fstream class, we can use it only for reading from a file.
    4. If a file object is declared with ofstream class, we can use it for reading from a file.
    5. None
11. What is the output of “ cout<<strnicmp("Computer Engineering", "computer Science ",10) ”;
    1. 0
    2. +ve Number
    3. -ve Number
    4. Undetermined value
    5. None

**int ptr1=2, ptr2=4,\*x,\*y,\*z;**

**float \*a,\*b, c=6, d=8;**

**a=&c;**

**void \*ptr3;**

Based this fragment of code answer question 4 to 6 ==>

1. which one is the correct c++ statement
   1. ptr1=&x;
   2. z=x;
   3. x=&c;
   4. a=&ptr1;
2. which one is not correct
   1. ptr3=ptr1;
   2. ptr3=&ptr2;
   3. ptr3=&d;
   4. x=ptr3;
   5. A and D
   6. B and C
3. which one is correct statement to display the Value of variable using pointer
   1. cout<<a;
   2. cout<<&a;
   3. cout<<\*a;
   4. cout<<\*c;
4. Assume the file is opened using ostream object. Which one is the default access mode
   1. ios::binary
   2. ios::in
   3. ios::out
   4. ios::app
5. Which function is used to move a pointer position in file reading mode
6. seekp( );
7. seekg( );
8. tellg( );
9. tellp( );
10. which fstream function returns the failure of file opening
    1. fail( );
    2. close( );
    3. error( );
    4. eof( );
11. Which one of the following is not correct statement while working on strings?
    1. char name[30] = “Aster”;
    2. char \*name = “Solomon”;
    3. char \*name;

name = “Jemal”;

* 1. char name[30];

name = “Abebech”;

1. Which one of the following is false about structures in C++?
   1. We can have array of structures.
   2. Structure variables can be passed to functions.
   3. We can return structure variables from functions
   4. We can create a pointer structure variable
   5. All of the above
   6. None
2. Assume using C++ code you are writing something to a file. You don’t want to overwrite the old file, rather you want to add the new text at the end of the previous text, what access mode should you use?
   1. ios::in
   2. ios::app
   3. ios::beg
3. Which one is not the advantage of functions?
4. Software reusability
5. Readability
6. Divide and conquer
7. None
8. In which function calling method the original arguments will be passed?
9. Call by value
10. Call by reference
11. Call by sharing
12. All
13. Which one of the following is not the necessary step in a recursive method
14. test to stop or continue the recursion
15. An end case that terminates the recursion
16. A recursive call(s) that continues the recursion
17. None
18. Which one of the following is false about array?
19. An array index starts at index 1.
20. The last element of an array index is the same as the size of the array.
21. An array contains data of a multiple data type.
22. It is legal to refer to an element outside of the array bounds
23. All
24. None
25. What is the output of the following C++ code?   
    int list[5] = {0, 5, 10, 15, 20};   
    int j;   
    for(j = 0; j < 5; j++)   
    cout<<list[j]<<" ";   
    cout<<endl;   
      
    A. 0 1 2 3 4   
    B. 0 5 10 15 20   
    C. 0 5 10 15   
    D. None of these
26. What is the output of the following C++ code?

int list[10] = {0, 5, 10, 15, 20, 60, 70};   
int j;   
for(j = 1; j < 8; j++)   
cout<<list[j]<<" ";   
cout<<endl;

1. 0 1 2 3 4
2. 0 5 10 15 20 60 70
3. 0 5 10 15 20 60 70 0
4. 5 10 15 20 60 70
5. 5 10 15 20 60 70 0
6. 0 5 10 15
7. None
8. By default how the value are passed in c++?
9. [A.](javascript:%20void(0)) call by value
10. [B.](javascript:%20void(0)) call by reference
11. [C.](javascript:%20void(0)) call by pointer
12. [D.](javascript:%20void(0)) none of the mentioned
13. Where should default parameters appear in a function prototype or function definition?
14. To the rightmost side of the parameter list
15. To the leftmost side of the parameter list
16. Anywhere inside the parameter list
17. Middle of the parameter list
18. If an argument from the parameter list of a function is defined constant then \_\_\_\_\_\_\_
19. It can be modified inside the function definition
20. It cannot be modified inside the function definition
21. Error occurs
22. None
23. Which of the following is true about automatic and static variable?
24. Static variables initialization can be executed only once during the first call
25. If static variables are not initialized explicitly, it will be initialized to 0 automatically
26. If local variables are static, their values remain in case the function is called again
27. Automatic variables contents will be erased when the function ends
28. All excepts A
29. All
30. Functions are overloaded if
31. if two or more functions differ only in their return types
32. if the number of arguments passed is different.
33. if the type of arguments passed is different.
34. if the number and/or type of arguments passed is different.
35. if the type of arguments passed is different and return type is different
36. All except A
37. All
38. Inlining a function is needed when
39. the function calls itself
40. the function body contains loops
41. the function size is too large
42. All
43. None
44. in c++ programming strcmp() function is used for
45. convert sting to char
46. copy two string
47. compare two string
48. all
49. What is the output of this program?

#include <iostream>

#include <string.h>

using namespace std;

int main()

{

struct student {

int num;

char name[25];

};

student stu;

stu.num = 123;

strcpy(stu.name, "John");

cout << stu.num << endl;

cout << stu.name << endl;

return 0;

}

a) 123  
    john  
b) 123john  
c) john123  
d) john

123

1. Which of the following is a properly defined structure?  
   a) struct {int a;}  
   b) struct a\_struct {int a;}  
   c) struct a\_struct int a;  
   d) struct a\_struct {int a;};
2. Which of the following correctly declares an array?

a) int array[10];  
b) int array;  
c) array{10};  
d) array array[10];

|  |
| --- |
| 1. If the two strings are identical, then strcmp() function returns |
| |  |  |  |  | | --- | --- | --- | --- | | [a).](javascript:%20void%200;) | -1 | [b).](javascript:%20void%200;) | 1 | | [c).](javascript:%20void%200;) | 0 | [d).](javascript:%20void%200;) | True | |

1. What is the output of the following C++ program?

int main ()

{

char str1[10] = "Hello";

char str2[10] = "World";

char str3[10];

int len ;

strcpy( str3, str1);

cout<<"strcpy(str3,str1)"<<str3<< endl;

strcat( str1, str2);

cout<<"strcat(str1,str2):"<<str1<<endl;

len = strlen(str1);

cout << "strlen(str1) : " << len << endl;

return 0;

}

A. strcpy(str3,str1)Hello

strcat(str1,str2):Hello

strlen(str1) : 10

B. strcpy(str3,str1)HelloWorld

strcat(str1,str2):HelloWorld

strlen(str1) : 10

C. strcpy(str3,str1)Hello

strcat(str1,str2):World

strlen(str1) : 10

D. strcpy(str3,str1)Hello

strcat(str1,str2):HelloWorld

strlen(str1) : 10

1. What is the output of the following C++ program?

int main ()

{

string str1 = "Hello";

string str2 = "World";

string str3;

int len ;

str3 = str1;

cout << "str3 : " << str3 << endl;

str3 = str1 + str2;

cout << "str1 + str2"<< str3 << endl;

len = str3.size();

cout << "str3.size() : " << len << endl;

return 0;

}

A.

str3 : Hello

str1 + str2HelloWorld

str3.size() : 10

B.

str3 : Hello

str1 + str2Hello

str3.size() : 10

C.

str3 : Hello

str1 + str2HelloWorld

str3.size() : 9

D.

str3 : Hello

str1 + str2

str3.size() : 0

1. What is the output of the following C++ program?

void main ()

{

int val1 = 5, val2 = 15;

int \*p1, \*p2;

  p1 = &val1;

p2 = &val2;

\*p1 = 10;

\*p2 = \*p1;

p1 = p2;

\*p1 = 20;

cout<<"value1="<<val1<<endl;

cout<<“val2="<<val2;

}

A. value1=10

val2=10

B. value1=10

val2=20

C. value1=20

val2=20

D. value1=0

val2=0

1. Which one of the following pairs of functions can’t be considered as overloaded functions?
   1. int test(int x, int y)

int test(int x, float y)

* 1. int test(float x, int y)

float test(int x, int y)

* 1. int test(int x, int y, int z)

int test(int x, int y)

* 1. int test(int x, int y)

float test(int x, int y)

* 1. float test(int x, int y)

int test(float x, float y)

1. What is the output of the following fragment of C++ code?

*float product(int a, float b=4.5, float c=5.5)*

*{ float p = 2\*(a + b + c);*

*ruturn p;*

*}*

*void main( )*

*{ int x = 3;*

*float y = 1.5, z = 3.5;*

*cout<<product( )<<endl;*

*}*

1. *10*
2. *5*
3. *0*
4. *Error*