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++?
   A. Writes to a file
   B. Reads from a file
   C. Both a & b
   D. None
2. Which operator is used to insert the data into file?
   A. >>
   B. <<
   C. <
   D. >
3. What is pointer?
   A. The variable that stores the value of another variable
   B. The variable that stores reference of garbage variable
   C. The variable that stores the memory address of another variable
   D. A & C Both
4. Which header file is used for reading and writing to a file?
   A. iostream
   B. fstream
   C. stdlib
   D. None of the mentioned
5. You have assigned the address of Value to the pointer P, Which statement will display the value stored in Value using pointer P?
   A. cout<<P;
   B. cout<<*Value;
   C. cout<<&P;
   D. cout<<*P;
6. When the _____ is present in front of a variable name, it represents the address of that variable.
   A. asterisk (*)
   B. conditional operator
   C. ampersand (&)
   D. semicolon (;)
7. In order, the three-step process of using a file in a C++ program involves:
   A. Name the file, open the file, and delete the file
   B. Insert a diskette, open a file, and remove the diskette
   C. Open the file, read/write data, close the file
   D. Create the file contents, close the file, and name the file
8. Consider the following snippet code and which statement is legal to use

```
flaot y;
int x;
int *ip;
float *fp;
```

   A. *ip = &y;*
   B. *fp = &x;*
   C. *ip = &x;*
   D. *fp = &y;*
   E. *A and B*
   F. *C and D*

9. Consider the following snippet code and which statement produce error

```
flaot y;
int x;
void *p;
```

   A. *p = &y;*
   B. *p = &x;*
   C. *cout<<p;*
   D. *cout<<*p*

10. Which statement is ***true***
    A. An array name is just a pointer that always points to the array's first element
    B. Assigning an array name without index to pointer is valid
    C. Assigning pointer to an array name without index is invalid
    D. All
    E. None
11. Which statement is ***false***

A. Structure is a collection of one or more variable types
B. Structure can be referred using a single name
C. Structure is user defined data type for grouping variables
D. All
E. None

12. 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();
}
```

A. num is 100
   *p is 100
   num is 500
   *p is 100
B. num is 100
   *p is 100
   num is 100
   *p is 500
C. num is 100
   *p is 100
   num is 100
   *p is 100
D. 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";
```

13. What is the output of the following code

I. cout<<name[0];

A. C ***C. C++***
B. C++ Programming ***D.***

14. What is the output of the following code

II. cout<<name;

A. C ***C. C++***
B. C++ Programming ***D.***

15. What is the output of the following code

III. cout<<*name;

A. C ***C. C++***

B. C++ Programming ***D.***

16. What is the output of the following code

IV. cout<<*(name+3);

A. C ***C. C++***

B. C++ Programming ***D.***

17. _____ string manipulation function looks for the first occurrence of a sub-string in another string.

A. strchr( ) C. strstr( )

B. strlwr( ) D. strupr( )

18. Which one of the following is true statement considering file input/output operations?

A. If a file object is declared with ofstream class, we can use it for writing and reading to and from a file.

B. If a file object is declared with ifstream class, we can use it for writing to a file.

C. If a file object is declared with fstream class, we can use it only for reading from a file.

D. If a file object is declared with ofstream class, we can use it for reading from a file.

E. None

19. What is the output of " cout<<strnicmp("Computer Engineering", "computer Science ",10) ";

A) 0

B) +ve Number

C) -ve Number

D) Undetermined value

E) None

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

20. which one is the correct c++ statement

A) ptr1=&x;

B) z=x;

C) x=&c;

D) a=&ptr1;

21. which one is not correct

A) ptr3=ptr1;

B) ptr3=&ptr2;

C) ptr3=&d;

D) x=ptr3;

E) A and D

F) B and C

22. which one is correct statement to display the Value of variable using pointer

A) cout<<a;

B) cout<<&a;

C) cout<<*a;

D) cout<<*c;

23. Assume the file is opened using ostream object. Which one is the default access mode

A) ios::binary

B) ios::in

C) ios::out

D) ios::app

24. Which function is used to move a pointer position in file reading mode

A) seekp( );

B) seekg( );

C) tellg( );

D) tellp( );

25. which fstream function returns the failure of file opening

A) fail( );

B) close( );

C) error( );

D) eof( );

26. Which one of the following is not correct statement while working on strings?
    A. char name[30] = “Aster”;
    B. char *name = “Solomon”;
    C. char *name;
       name = “Jemal”;
    D. char name[30];
       name = “Abebech”;

27. Which one of the following is false about structures in C++?
    A. We can have array of structures.
    B. Structure variables can be passed to functions.
    C. We can return structure variables from functions
    D. We can create a pointer structure variable
    E. All of the above
    F. None

28. 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?
    A. ios::in
    B. ios::app
    C. ios::beg

29. Which one is not the advantage of functions?
    E. Software reusability
    F. Readability
    G. Divide and conquer
    H. None

30. In which function calling method the original arguments will be passed?
    A. Call by value
    B. Call by reference
    C. Call by sharing
    D. All

31. Which one of the following is not the necessary step in a recursive method
    A. test to stop or continue the recursion
    B. An end case that terminates the recursion
    C. A recursive call(s) that continues the recursion
    D. None

32. Which one of the following is false about array?
    A. An array index starts at index 1.
    B. The last element of an array index is the same as the size of the array.
    C. An array contains data of a multiple data type.
    D. It is legal to refer to an element outside of the array bounds
    E. All
    F. None

33. 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

34. 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;
```

A. 0 1 2 3 4
B. 0 5 10 15 20 60 70
C. 0 5 10 15 20 60 70 0
D. 5 10 15 20 60 70
E. 5 10 15 20 60 70 0
F. 0 5 10 15
G. None

35. By default how the value are passed in c++?
A. A. call by value
B. B. call by reference
C. C. call by pointer
D. D. none of the mentioned

36. Where should default parameters appear in a function prototype or function definition?
A. To the rightmost side of the parameter list
B. To the leftmost side of the parameter list
C. Anywhere inside the parameter list
D. Middle of the parameter list

37. If an argument from the parameter list of a function is defined constant then _____
A. It can be modified inside the function definition
B. It cannot be modified inside the function definition
C. Error occurs
D. None

38. Which of the following is true about automatic and static variable?
A. Static variables initialization can be executed only once during the first call
B. If static variables are not initialized explicitly, it will be initialized to 0 automatically
C. If local variables are static, their values remain in case the function is called again
D. Automatic variables contents will be erased when the function ends
E. All excepts A
F. All

39. Functions are overloaded if
A. if two or more functions differ only in their return types
B. if the number of arguments passed is different.
C. if the type of arguments passed is different.

D. if the number and/or type of arguments passed is different.
E. if the type of arguments passed is different and return type is different
F. All except A
G. All

40. Inlining a function is needed when
    A. the function calls itself
    B. the function body contains loops
    C. the function size is too large
    D. All
    E. None

41. in c++ programming strcmp() function is used for
    A. convert sting to char
    B. copy two string
    C. compare two string
    D. all

42. 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

43. 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;};

44. Which of the following correctly declares an array?

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

45. If the two strings are identical, then strcmp() function returns

a). -1 b). 1
c). 0 d). True

46. 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

47. 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

48. 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
```

49. Which one of the following pairs of functions can't be considered as overloaded functions?
    a. int test(int x, int y)
       int test(int x, float y)
    b. int test(float x, int y)
       float test(int x, int y)
    c. int test(int x, int y, int z)
       int test(int x, int y)
    d. int test(int x, int y)
       float test(int x, int y)
    e. float test(int x, int y)
       int test(float x, float y)

50. 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;

}
```

A. 10
B. 5
C. 0
D. Error