10820EE231000 C++程式設計 HW1 (Ch.1-3) due:2020.03.19

Part 1 選擇(30%, 1 for each)

Chapter 1

1) The term **hardware** refers to \_\_\_\_\_\_\_\_.

A) the difficulty of programming

B) the physical components that make up a computer

C) the way a computer's storage space is organized

D) the fixed order of a program's instructions

E) None of the above

2) At the heart of a computer is its central processing unit. The CPU's job is to \_\_\_\_\_\_\_\_.

A) fetch instructions

B) carry out the operations commanded by the instructions

C) produce some result

D) do all of the above

E) do none of the above

3) An integrated development environment (IDE) normally includes \_\_\_\_\_\_\_\_.

A) a text editor

B) a compiler

C) a debugger

D) All of the above

E) None of the above

4) The purpose of a memory address is \_\_\_\_\_\_\_\_.

A) to identify the location of a memory cell.

B) to allow multitasking.

C) to prevent multitasking.

D) to locate a program.

E) None of the above.

5) Creating a program requires many steps. Three of these are \_\_\_\_\_\_\_\_.

A) input, processing, and output

B) key words, operators, and punctuation

C) program design, writing source code, and testing

D) syntax, logic, and error handling

E) None of the above

6) The \_\_\_\_\_\_\_\_ coordinates the computer's operations by fetching the next instruction and using control signals to regulate the other major computer components.

A) arithmetic unit

B) logic unit

C) arithmetic and logic unit (ALU)

D) control unit

E) operating system

7) A(n) \_\_\_\_\_\_\_\_ is a set of instructions that tells the computer how to solve a problem.

A) compiler

B) linker

C) program

D) operator

E) variable

8) A set of well-defined steps for performing a task or solving a problem is known as \_\_\_\_\_\_\_\_.

A) a hierarchy chart

B) a flowchart

C) a solution engine

D) an algorithm

E) software engineering

9) Words with a special meaning that may be used only for their intended purpose are known as \_\_\_\_\_\_\_\_.

A) low-level language

B) programmer-defined identifiers

C) key words

D) syntax words

E) None of the above

10) Mistakes that allow a program to run, but cause it to produce erroneous results are called \_\_\_\_\_\_\_\_.

A) syntax errors

B) logic errors

C) compiler errors

D) linker errors

E) None of the above

Chapter 2

11) The \_\_\_\_\_\_\_\_ directive causes the contents of another file to be inserted into a program.

A) #getfile

B) #library

C) #include

D) All of the above

E) None of the above

12) \_\_\_\_\_\_\_\_ are data items whose values cannot change while the program is running.

A) Constants

B) Variables

C) Comments

D) Integers

E) None of the above

13) Which of the following is/are valid C++ identifiers?

A) June-2010

B) June 2010

C) June\_2010 //不可數字在前

D) 2010June

E) Both C and D are valid identifiers, but A and B are not.

14) A C++ character constant (character literal) is enclosed in \_\_\_\_\_\_\_\_ quotation marks, whereas a string constant (string literal) is enclosed in \_\_\_\_\_\_\_\_ quotation marks.

A) double, single

B) triple, double

C) open, closed

D) single, double

E) no, some

15) The bool data type \_\_\_\_\_\_\_\_.

A) can be used to store a single character

B) has only two values: true and false

C) is used to store extra large numbers

D) is used to represent numbers in E notation

E) does none of the above

16) Every C++ program must have \_\_\_\_\_\_\_\_.

A) comments

B) variables

C) constants

D) a function called main.

E) All of the above

17) In programming terms, a group of characters inside a set of double quotation marks (" ") is called

A) a character constant.

B) a string constant.

C) a string literal.

D) All of the above.

E) either B or C, but not A

18) Which of the following is/are valid C++ identifiers?

A) department\_9

B) aVeryLongVariableName

C) last.name

D) All of the above are valid identifiers.

E) Both A and B are valid identifiers, but C is not.

19) \_\_\_\_\_\_\_\_ must be included in a program in order to use the cout object.

A) Opening and closing braces

B) The iostream header file

C) A cout declaration

D) Strings

E) None of the above

20) An operation that copies a value into a variable is called a(n) \_\_\_\_\_\_\_\_ operation.

A) assignment

B) equals

C) copy

D) declaration

E) cout

Chapter 3

21) \_\_\_\_\_\_\_\_ causes a program to wait until information is typed at the keyboard and the Enter key is pressed.

A) An input device

B) The cin object

C) The cout object

D) A preprocessor

E) Nothing

22) The \_\_\_\_\_\_\_\_ operator always follows the cin object, and the \_\_\_\_\_\_\_\_ operator follows the cout

object.

A) input, endl

B) getChar, printChar

C) >> , <<

D) >> , >>

E) << , >>

23) Program code that can be evaluated to a value is called a(n) \_\_\_\_\_\_\_\_.

A) operation

B) line

C) evaluator

D) result

E) expression

24) In C++, a value can be raised to a power by using \_\_\_\_\_\_\_\_.

A) the ^ operator

B) the exp operator

C) the power operator

D) the pow function

E) the square function

25) Which of the following expressions will evaluate to 2.5?

A) static\_cast<double>(5 / 2)

B) static\_cast<double>(5) / 2

C) 5 / static\_cast<double>(2)

D) All three of the above

E) Both B and C, but not A

26) The \_\_\_\_\_\_\_\_ stream manipulator can be used to establish a field width for the value immediately following it.

A) cin

B) setField

C) setw

D) iomanip

E) width

27) When an arithmetic expression contains two or more different operators, such as \* and +, the order in which the operations is done is determined by \_\_\_\_\_\_\_\_.

A) left to right order

B) operator precedence

C) operator associativity

D) the programmer

E) the compiler

28) The statement cout << setw(4) << num4 << " "; \_\_\_\_\_\_\_\_.

A) outputs the value of num4 rounded to 4 decimal places.

B) outputs "setw(4)" before the value in the variable num4.

C) outputs the first 4 digits of the number stored in num4.

D) outputs the value stored in num4 four times.

E) does none of above.

29) To use the sqrt() function, or other mathematical library functions, you must #include the \_\_\_\_\_\_\_\_ header file in your program.

A) iostream

B) iomanip

C) cmath

D) algebra

E) mathlib

30) The cin object must be followed by \_\_\_\_\_\_\_\_.

A) a single stream insertion (<<) operator

B) one or more stream insertion operators (<<)

C) a single stream extraction (>>) operator

D) one or more stream extraction (>>) operators

E) no operators

Part2 填充(10%, 2 for each)

1) True/False: If number has been defined as an int variable, both of the following statements will print out its value:

cout << number;

cout << "number";

2) The expression 5 % 2 evaluates to \_\_\_\_1\_\_\_\_.

3) True/False: The following two statements will assign the same value to result.

result = a + b \* c;

result = b \* c + a;

4) True/False: When an operator's operands are of different data types, such as int and double, C++ automatically converts one of them so that they are the same data type.

5) True/False: If the value of dollars is 5.0, the following statement will output 5.00 to the monitor:

cout << fixed << showpoint << setprecision(4)

<< dollars << endl;

Part3 Coding(60%)

1. (10%)write a program that calculates how much a student

organization earns during its fund raising candy sale. The program should prompt the user to enter the number of candy bars sold and the amount the organization earns for each bar sold. It should then calculate and display the total amount earned.

1. (10%)Write a program that displays the following pattern on the screen:



1. (10%)Kathryn bought 600 shares of stock at a price of $21.77 per share. A year later she sold them for just $16.44 per share. Write a program that calculates and displays the following:

• The total amount paid for the stock.

• The total amount received from selling the stock.

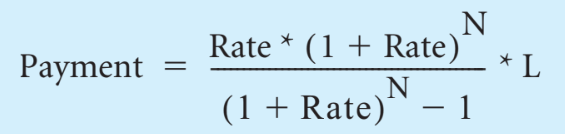
• The total amount of money she lost.

1. (10%)Write a program that will convert U.S. dollar amounts to Japanese yen and to euros, storing the conversion factors in the constant variables YEN\_PER\_DOLLAR and EUROS\_PER\_DOLLAR. To get the most up-to-date exchange rates, search the Internet using the term “currency exchange rate” or “currency converter”. If you cannot find the most recent exchange rates, use the following:

1 Dollar = .952 Yen

1 Dollar = .7175 Euros

1. (20%) The monthly payment on a loan may be calculated by the following formula:



Rate is the monthly interest rate, which is the annual interest rate divided by 12. (A 12 percent annual interest would be 1 percent monthly interest.) N is the number of payments and L is the amount of the loan. Write a program that asks for these values and displays a report similar to the following:

Loan Amount: $ 10000.00

Monthly Interest Rate: 1%

Number of Payments: 36

Monthly Payment: $ 332.14

Amount Paid Back: $ 11957.15

Interest Paid: $ 1957.15