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### 一、簡答題

A-1. What are the ports available on an ordinary notebook computer? How can you determine what ports you need? (10%)

A-2. Why are wireless networks more vulnerable than wired network? What special precautions are required to ensure your wireless network is secure? (10%)

A-3. How can you synchronize your PDA/smartphone with your computer? Use specific devices to illustrate your process. (10%)

A-4. What challenges do you expect for a traditional manufacturer that wants to implement collaborative SCM systems? How would you suggest to meet such challenges? (10%)

A-5. Discuss: "Information technology can't really give a company a strategic advantage because most competitive advantages don't last more than a few years and soon become strategic necessities that just raise the stakes of the game." (10%)

B1- (8 points) The essential components of components used to process data inside a system unit are Power supply, Hard disk drive, Motherboard, CPU, RAM, Expansion cards (or adapter cards). Please draw a picture, in details, to indicate the location of the above listed components and their sub-components inside a system unit.

B2- (8 points) A computer's four major functions are Input, Process, Output, Feedback and control. Please exemplify one or more approaches to achieve ergonomic design for each function.

B3- (20 points; each question 4 points) Please answer the following Multiple-Select questions.  
NOTE: You may select one or more correct answers in each question. To receive the full 4 points, you need to have the exactly right numbers and items when selecting answers. Otherwise, the points will be deducted 1 point when missing or guessing wrong one item in your answers.

(B3-1) About C and C++ programming language, what is/are correct description(s)?

- C++ uses the same features as C.
- C and C++ are both OOP language.
- C and C++ share the same Standard Library.
- Writing programs in C and C++ guarantees portability.
- Writing and then compiling C or C++ programs could print the same outputs.

(背面仍有題目,請繼續作答)

系所組別：資訊管理研究所乙組

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(B3-2) About executing a program, what is/are correction description(s)?

- Syntax errors are also called runtime errors.
- Some compilation errors are not syntax errors.
- The backslash characters after `\\` will be printed.
- The codes `std::cout << "welcome\nto\n\nNCKU!\n";` will be printed three lines on the screen
- Using redundant parentheses in complex arithmetic expressions can produce runtime errors.

(B3-3) About operators, what is/are correction description(s)?

- The assignment operator `=` should be read from right to left.
- The equality operator `==` should be read "gets the value of".
- The operator `%` is evaluated earlier than the operator `*`
- The conditional operator `?!` is evaluated from right to left.
- Both logical AND `&&` and logical OR `||` operators are evaluated from right to left.

(B3-4) About the class, objects and functions in C++, what is/are correction description(s)?

- The class's name is often written after the keyword `CLASS` with all letters in lower cases.
- To initialize an object's data, a default constructor can be defined to return a value.
- A function whose return type has been declared `void` would only return a constant value.
- The parameter type and name in the function prototypes are both required to define.
- The attributes of each class's object are represented as data members.

(B3-5) About the control statements in C++, what is/are correction description(s)?

- The codes `if ();` would not be executed in a program.
- A series of single-selection `if` statements performs much faster than a nested `if...else` statement.
- `while` loop repeats until condition becomes true.
- The `for` statement can usually be rewritten as the form of the `while` statement.
- `else` provides a default case in `switch` statements.

B4- (14 points) Use any programming language you want to write one or several programs that contain many function calls to help explain all the features of a radio. HINT: Several control structures of the functions may be used here. A traditional radio includes the features of manual and/or automatic channel tune [AM or FM channel number], volume adjuster and cassette recorder. A stereo radio has more features than the traditional one.