

Part I: Logics and Computer Programming (35%): you should write your program using one of the following programming languages: Fortran, C, C++ or Java.

(20%) A simple linear search algorithm for an array works like the following: we first need to know the value we are seeking for; we call this the target. We then can perform search by examining each array element using a loop and by testing whether the element matches the target. The search loop should be exited when the target value is found. (1) Draw a flow chart to depict the above-mentioned algorithm and (2) write a program to perform the linear search algorithm for an integer array.

(15%) Write a program to decide whether a word reading from the input is a palindrome (that is, if its representation is symmetric; examples are ada, otto, and tut).

Part II: 問答題 (65%)

1. (25%) 一項新資訊技術的普及通常都會對土木領域在解決工程問題帶來一定的衝擊。試以 wireless sensor network 為例，闡述此技術對橋樑「健康」管理可能帶來的衝擊。
2. (20%) Describe one of the web technologies listed below in details. Your description should at least include the intent of the technology, the problems it tries to solve and its known usages in practice. (Your choice of web technologies: XML, ASP, XOOB, and Java script)
3. (20%) Describe one of the computer languages listed below in details. Your description should at least include the main features of the language, the problems it tries to solve and its known usages in practice. (Your choice of computer languages: C++, Java, Python)

試題隨卷繳回