

國立臺北大學九十七學年度碩士班招生考試試題

系(所)別：電機工程研究所
科 目：計算機概論

組 別：乙組(電腦工程組)

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可 不可使用計算機

1. In the following problems, each bit pattern represents a value stored in two's complement notation.
 - (a)(6%) Complete the addition operation $01111110 + 10101010$ in two's complement notation.
 - (b)(4%) Translate the above problem and your answer into base ten notation.
- 2.(10%) Compare these operating systems: DOS, Windows XP, Linux, FreeBSD.
- 3.(10%) What are main features of computer viruses? Try to classify computer viruses as detailed as you can.
4. Explain the features, functions, and applications for each kind of cards below.
 - (a)(5%) IC Memory Card?
 - (b)(5%) Smart Card?
- 5.(10%) To encrypt/decrypt information, cryptosystems are classified into symmetric and asymmetric. Explain the differences between symmetric and asymmetric cryptosystems, and give a comparison between them.
6. Answer the following questions sequentially.
 - (a) (10%) A Turing test is the fundamental concept in the area of Artificial Intelligence (AI). Clearly describe the content of a Turing test.
 - (b) (10%) What are five levels of CMMI (Capability Maturity Model Integration)?
 - (c) (10%) Completely describe the content of the software development life cycle.
 - (d) (10%) What are the main differences between data base (DB) and data base management system (DBMS)?
 - (e) (10%) Figure out the differences between a web page and a web site.