

國立嘉義大學 100 學年度

資訊管理學系碩士班（乙組）招生考試試題

科目：計算機概論

1. Please convert the floating-point number 69.3125 into binary using 32-bit Excess-127 representation (IEEE-754 standard). (5 分)
2. Please convert the 32-bit floating-point number $1\ 01111110\ 1100110000000000000000_2$ in Excess-127 into decimal. (5 分)
3. Assume that there is a bit string 10000000_2 , please answer the following questions:
 - (a) What is its one's complement? (4 分)
 - (b) What is its two's complement? (4 分)
 - (c) Please interpret the bit string in decimal if the number is stored as a two's complement integer. (6 分)
4. Please briefly define "word size" and specify what generally determines the size of a word in a computer system. (8 分)
5. Please briefly compare the interpreter with the compiler. (8 分)
6. If a binary search is used to find an item in an index file consisting of N items (N is large), what is the mean number of comparisons required to locate a specific index entry? (5 分)
7. What address class is the IP address 140.130.81.11 in? (5 分)
8. Please name and draw the diagrams for any three common computer network topologies. (9 分)
9. Please specify which layers in the OSI reference model that TCP/IP correspond to. (8 分)
10. Please briefly describe what "Class" and "Object" are in OO programming. (8 分)
11. Please briefly define the following terms : (25 分)
 - (a) B2B
 - (b) C2C
 - (c) P2P Networking
 - (d) Point-to-Point Protocol
 - (e) Direct Memory Access