

# 國立交通大學 97 學年度碩士班考試入學試題

科目：計算機概論(3131)

考試日期：97 年 3 月 8 日 第 2 節

系所班別：土木工程學系

組別：土木系己組

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【可使用計算機】\*作答前請先核對試題、答案卷(試卷)與准考證之所組別與考科是否相符!!

1. Describe the basic components of UML. (10%)
2. Explain the difference between "raster image" and "vector image". (12%)
3. Brief explain the following term: (8%)
  - a. GUI
  - b. SQL
  - c. XML
  - d. Wiki
4. Please find the approximate value for  $\int_0^1 e^x dx$  using Trapezoidal Rule as taking  $n = 10$ . Also, analyze the error between the computed result and the real value. (15%)
5. Complete the following recursive function that calculates the value of number (base) raised to a power. Assume that power is a nonnegative integer. (10%)

```
int power_raiser(int base, int power)
{
    int ans;
    if (power==_____)
        ans= _____;
    else
        ans= _____* _____;
    return (ans);
}
```

6. Brief describe what is RISC (Reduced Instruction Set Computer). (10%)
7. Please describe what is top-down and bottom-up in software development procedure. (10%)
8. Describe what is stack? (10%)
9. Please write out the pseudo code to move the six plates in A to C ( as in the following figure) . No Larger plate will be allowed to stay above the smaller plate in the moving procedure. (15%)

