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%)

   ```c
   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%)

   ![Diagram of plates]