

CSI 518 Software Engineering
Fall 2002 Final Examination
May 10 Friday 10:30 - 12:30

Q1: (10 points) What are the three major types of software maintenance activities? (Give a brief description for each activity.)

Q2: (10 points) What is software configuration management and what are the key activities in software configuration management?

Q3: (10 points) What types of software would need to be re-engineered and what are the factors used to determine re-engineering or re-developing?

Q4: (10 points) What is CORBA? Describe the structure and the significance of CORBA.

Q5: (10 points) Briefly describe the five CMM levels.

Q6: (10 points) What are the purposes of Risk Prioritization and how to prioritize risk items?

Q7: (10 points) The program P given below contains one error as indicated.

```
integer  $x, y, z$ ;  
input( $x$ ); input( $y$ );  
if ( $x \geq 2$ ) then  
     $z = x * 2$ ; ← This statement should be:  $z = x$  in the correct program  $P_c$ .  
else  
     $x = y * (y - x)$ ;  
endif;  
output( $z$ );
```

Use the above example to demonstrate that program slicing can be useful in debugging.

Q8: (20 points) Describe Function Dependence Relationship and give three areas that this relationship can be utilized to improve software quality.

Q9: (10 points) (a) briefly describe your team project and your role in this project. (b) Team evaluations.

Team leaders: evaluate your group leaders, significant team members and volunteers.

Group leaders: evaluate your team leader, group members and volunteers.

Others: evaluate your team leader, group leader and other members in your group.