

Name: _____ (First name first)

Score: _____

COSC 6360

FINAL QUIZ

AUGUST 6, 2009

This exam is closed book. You can have one page of notes.

1. In the Pergamum storage system,

a. What is the function of *intra-disk parity blocks*? (10 points)

b. How do they contribute to *reduce the power consumption* of the system? (10 points)

c. Which data are stored inside the *flash memory* attached to each Pergamum tome? (10 points)

d. How do these data contribute to *reduce the power consumption* of the system? (10 points)

2. What are the three exchanges of messages that occur during the *gracious execution* of the Zyzyva Byzantine fault-tolerant protocol? (3×12 points)

a. Client _____ send(s) a message to _____

b. _____ send(s) a message to _____

c. _____ send(s) a message to _____

3. Given the two *extended Jif declarations*:

```
int {alice -> alice; alice <- alice} x;  
int {bob -> alice, bob, carol; bob <- alice, bob} y;
```

what must be done to allow the execution of: (2×12 points)

a. $x=y$;

b. $y=x$;
