

CS3733-B05 Final Exam

```
    return size;  
}
```

- How many test cases do you need to ensure that each line is executed?
- How many test cases do you need to ensure that each condition is exercised?
- How many paths are there?
10. (4) In the textbook, what is the tool that they use for automating system tests?
11. (5) What is the purpose of *integration* in the software delivery process?
12. (5) What is a major problem in testing an aspect-oriented program?
13. (10) According to Parnas and Clements, the ideal process will never be followed on a real project. However, they argue that having a description of the ideal process is valuable. List three reasons why this is so.
14. (8) What is *Defensive Programming*? When might you employ it?

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15. (4) Is the following code an example of defensive programming, or programming by contract?

```
public double squareRoot(double d)
{
    return sqrt(d);
}
```

16. (4) The code in the previous problem is an example of a pattern that allows a program that uses the method “squareRoot” to get the Java library’s sqrt functionality, without having to change the calling code. What pattern is this?

17. (5) In software, what do we mean by the “architecture” of a system?

