

1. Typical defects that are easier to find in reviews than in dynamic testing are:
- A. deviations from standards,
 - B. requirement defects,
 - C. design defects,
 - D. insufficient maintainability and incorrect interface specifications.
 - E. All of the above.
2. Reviews, static analysis and dynamic testing have the same objective –
- A. identifying defects.
 - B. fixing defects.
 - C. 1 and 2
 - D. None
3. A defect arrival rate curve:
- A. Shows the number of newly discovered defects per unit time
 - B. Shows the number of open defects per unit time.
 - C. Shows the cumulative total number of defects found up to this time.
 - D. Any of these, depending on the company.
4. We can achieve complete statement coverage but still miss bugs because:
- A. The failure occurs only if you reach a statement taking the TRUE branch of an IF statement, and you got to the statement with a test that passed through the FALSE branch.
 - B. The failure depends on the program's inability to handle specific data values, rather than on the program's flow of control.
 - C. We are not required to test code that customers are unlikely to execute.
 - D. All of the above
5. Measurement dysfunction is a problem because:
- A. Even though the numbers you look at appear better, to achieve these numbers, people are doing other aspects of their work much less well.
 - B. We don't know how to measure a variable (our measurement is dysfunctional) and so we don't know how to interpret the result.
 - C. You are measuring the wrong thing and thus reaching the wrong conclusions.
 - D. All of the above.
6. According to the lecture, there are several risks of managing your project's schedule with a statistical reliability model. These include (choose one or more of the following):

- A. Testers spend more energy early in the product trying to find bugs than preparing to do the rest of the project's work more efficiently
- B. Managers might not realize that the testing effort is ineffective, late in the project, because they expect a low rate of bug finding, so the low rate achieved doesn't alarm them.
- C. It can increase the end-of-project pressure on testers to not find bugs, or to not report bugs.
- D. All of the above

7. Important consequences of the impossibility of complete testing are (Choose one or more answers):

- A. We can never be certain that the program is bug free.
- B. We have no definite stopping point for testing, which makes it easier for some managers to argue for very little testing.
- C. We have no easy answer for what testing tasks should always be required, because every task takes time that could be spent on other high importance tasks.
- D. All of the above.

8. In the MASPAP case study:

- A. Security failures were the result of untested parts of code.
- B. The development team achieved complete statement and branch coverage but missed a serious bug in the MASPAP operating system.
- C. An error in the code was so obscure that you had to test the function with almost every input value to find its two special-case failures.
- D. All of the above.

9. Complete statement and branch coverage means:

- A. That you have tested every statement in the program.
- B. That you have tested every statement and every branch in the program.
- C. That you have tested every IF statement in the program.
- D. That you have tested every combination of values of IF statements in the program

10. Which is the best definition of complete testing:

- A. You have discovered every bug in the program.
- B. You have tested every statement, branch, and combination of branches in the program.
- C. You have completed every test in the test plan.
- D. You have reached the scheduled ship date.

Answers:

1. E
2. A
3. A
4. A and B
5. A
6. D
7. D
8. C
9. B
10. A