

## Quiz# 1

Name:

ID #:

Section 2

Serial #:

---

Engineers in charge of maintaining nuclear reactors must continuously check for corrosion inside the pipes of the cooling system. A nondestructive test can indicate a possible corrosion. The test has probability 0.7 of indicating corrosion when it is present but it also has probability 0.2 of falsely indicating internal corrosion. If an internal corrosion has probability 0.1, then determine the probability that:

a. A pipe has internal corrosion given that the test indicates its presence.

b. A pipe has internal corrosion given that the test is negative.

c. A pipe has internal corrosion and the test is positive.

d. A pipe has no internal corrosion or the test is negative.

---

With My Best Wishes