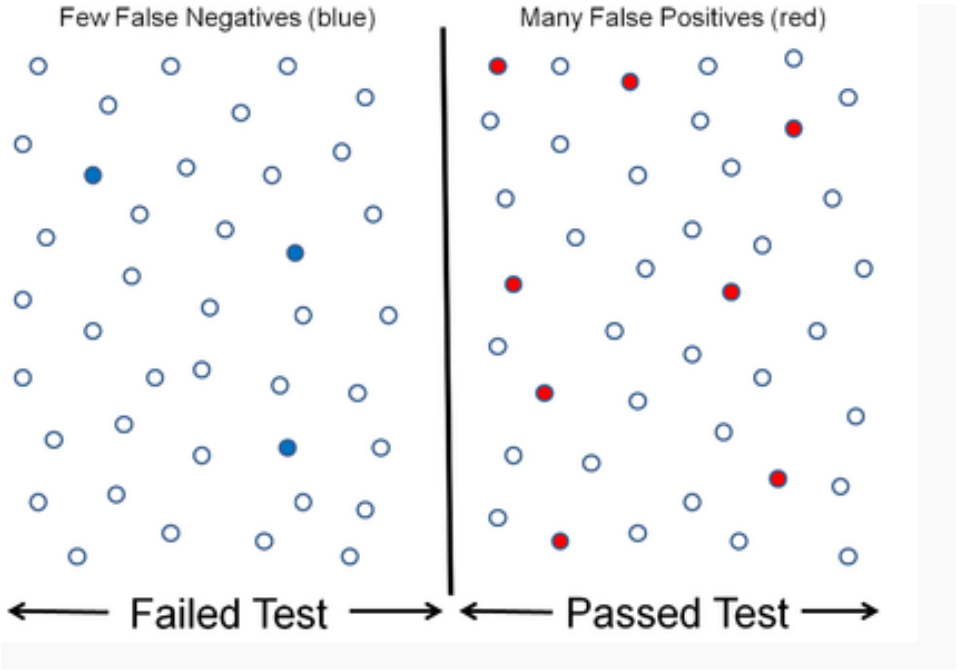
Question 01

Which of the following statements are true?



1. Few false negatives is High Sensitivity and Many false positives is Low specificity
2. Few false negatives is Low Sensitivity and Many false positives is Low specificity
3. Few false negatives is Low Sensitivity and Many false positives is High specificity
4. Few false negatives is High Sensitivity and Many false positives is High specificity

Question 02

Smaller p-values indicate more evidence in support of:

1. the null hypothesis
2. the alternative hypothesis
3. the quality of the researcher
4. further testing

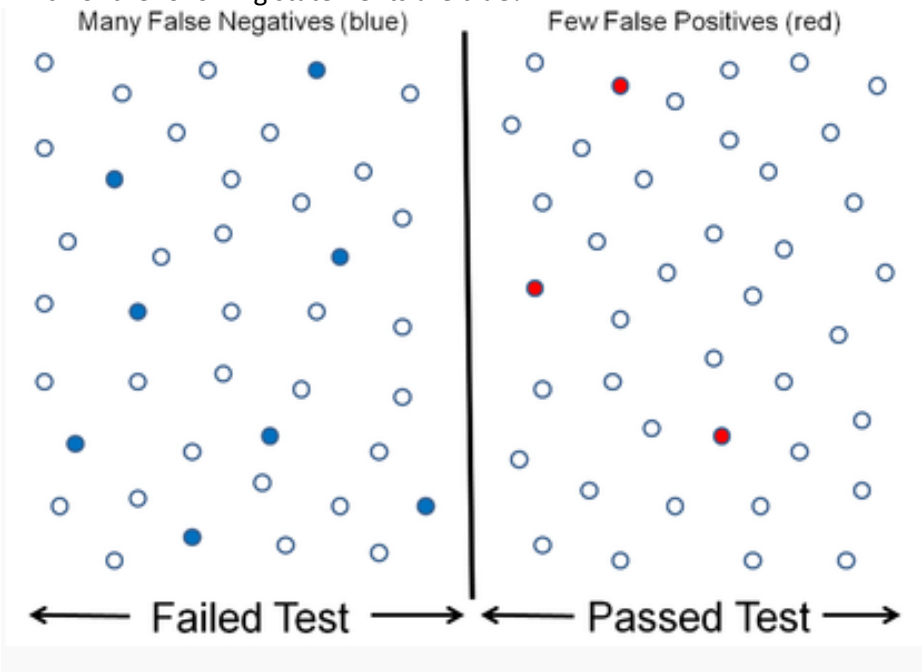
Question 03

If a teacher is trying to prove that new method of teaching math is more effective than traditional one, he/she will conduct a:

1. one-tailed test
2. two-tailed test
3. point estimate of the population parameter
4. confidence interval

Question 04

Which of the following statements are true?



1. Many false negatives is High Sensitivity and Few false positives is Low specificity
2. Many false negatives is Low Sensitivity and Few false positives is Low specificity
3. Many false negatives is Low Sensitivity and Few false positives is High specificity
4. Many false negatives is High Sensitivity and Few false positives is High specificity

Question 05

The value set for α in a hypothesis test is known as:

1. the rejection level
2. the acceptance level
3. the significance level
4. the error in the hypothesis test

Question 06

If it's specifically mentioned that we have a two tailed test, and the calculated Z = + 1.75 the area the right of which is 0.0401 then the p value is

1. 0.0401
2. 0.02005
3. 0.0802
4. Insufficient information

Question 07

Given the following hypothesis

Ho: $\mu = 10$

H1: $\mu \neq 10$

If the σ is known then the test statistic is

1. Only Z
2. Only t
3. Either Z or t
4. None of the above

Question 08

Given the following hypothesis

Ho: $\mu \leq 100$

H1: $\mu > 100$

If the σ is unknown but we have the sample standard deviation denoted by S then the test statistic is

1. Only Z
2. Only t
3. Either Z or t
4. None of the above

Question 09

A firm bidding for two contracts one for constructing a power plant and the other for its maintenance, estimates that the probability of obtaining the construction contract is 0.45. Should the firm get the construction contract then there is a 0.9 probability that they will also get the maintenance contract. What are the chances of landing both contracts?

1. 0.405
2. 0.5
3. 0.65
4. 0.5505

Question 10

You conduct a hypothesis test and you observe values for the sample mean and sample standard deviation when n = 25 that do not lead to the rejection of H_0. You calculate a *p*-value of 0.0667. What will happen to the *p*-value if you observe the same sample mean and standard deviation for a sample > 25?

1. Increase
2. Stay the same
3. Decrease
4. May either increase or decrease

Question 11

For the following hypothesis test, which of the below is true?

Ho: $p = 0.7$

H1: $p \neq 0.7$

1. Left tailed test
2. Right tailed test
3. Two tailed test
4. Insufficient information

Answer Key

1) 1

2) 2

3) 1

4) 3

5) 3

6) 3

7) 1

8) 2

9) 1

10) 3

11) 3