# Answer

The correct answer is (D) Type 2 error.

## Explanation

In hypothesis testing, there are two possible types of errors:

- \*\*Type 1 error\*\*: Rejecting the null hypothesis when it is actually true. This error probability is denoted by α (alpha).

- \*\*Type 2 error\*\*: Failing to reject the null hypothesis when it is actually false. This error probability is denoted by β (beta).

The question specifically describes the scenario of "failing to reject the null hypothesis when it is false," which is the definition of a Type 2 error.

To remember this:

- Type 1 error: Rejecting H₀ when true (false positive)

- Type 2 error: Failing to reject H₀ when false (false negative)

While beta (β) represents the probability of making a Type 2 error, the error itself is called a Type 2 error, not beta. Similarly, alpha (α) represents the probability of making a Type 1 error, not the error itself.