

Question

Assertion

A cloth covers a table. Some dishes are kept on it. The cloth can be pulled out without dislodging the dishes from the table.

Reason

For every action, there is an equal and opposite reaction.

A Both Assertion and Reason are correct and Reason is the correct explanation for Assertion

B Both Assertion and Reason are correct but Reason is not the correct explanation for Assertion

C Assertion is correct but Reason is incorrect

D Assertion is incorrect but Reason is correct

Solution

Correct option is

B)

If the cloth is pulled out very fast, then the time interval of application of frictional force is very small. This small value of impulse is insufficient to cause a VISIBLY SIGNIFICANT change. Hence, assertion is correct.

Reason is the statement of Newton's third law of motion and it's correct.

But reason isn't the correct explanation.