

Assertion A : If in five complete rotations of the circular scale, the distance travelled on main scale of the screw gauge is 5 mm and there are 50 total divisions on circular scale, then least count is 0.001 cm.

Reason R :

$$\text{Least Count} = \frac{\text{Pitch}}{\text{Total divisions on circular scale}}$$

In the light of the above statements, choose the most appropriate answer from the options given below :

- A A is not correct but R is correct.
- B Both A and R are correct and R is the correct explanation of A.
- C A is correct but R is not correct.
- D Both A and R are correct and R is NOT the correct explanation of A.

Explanation

$$\text{Least Count} = \frac{\textit{Pitch}}{\textit{Total divisions on circular scale}}$$

In 5 revolution, distance travel, 5 mm

In 1 revolution, it will travel 1 mm.

$$\text{So least count} = \frac{1}{50} = 0.02$$