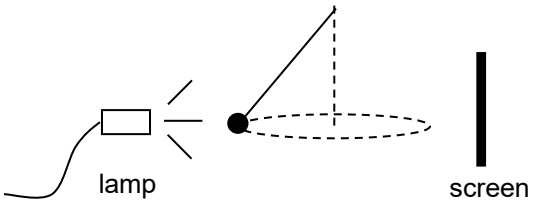
14 A conical pendulum undergoes uniform circular motion in a horizontal plane. The radius of the circular path is 0.500 m and the time taken to complete one revolution is 2.16 s. A lamp shines on the pendulum bob as shown.



The shadow of the bob on the screen was observed to move back and forth along a horizontal line with

A constant speed of 1.45 m s^{-1}.

B constant speed of 4.23 m s^{-1}.

C speed varying between 0 and 1.45 m s^{-1}.

D speed varying between 0 and 4.23 m s^{-1}.