Question 3

A particle of mass 5 kg is on a rough horizontal plane. The particle is acted upon up by a force of T newtons acting at an angle of 60^0 to the plane. A frictional force of $\dfrac{49\sqrt{3}}{3}$ newtons acting parallel to the plane, opposes the motion. Then if

A. $T = \dfrac{98\sqrt{3}+30}{3}$ the particle moves along the plane with an acceleration of 1 ms^{-2}.

B. $T = \dfrac{98\sqrt{3}-30}{3}$ the particle moves along the plane with an acceleration of 1 ms^{-2}.

C. $T = \dfrac{98\sqrt{3}+60}{3}$ the particle moves along the plane with an acceleration of 2 ms^{-2}.

D. $T = \dfrac{98\sqrt{3}-60}{3}$ the particle moves along the plane with an acceleration of 2 ms^{-2}.

E. $T < \dfrac{98\sqrt{3}}{3}$ the particle does not move.