ARJUNA (NEET)

Newton's Law of Motion

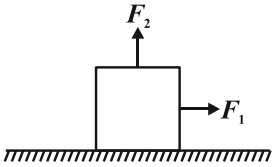
DPP-06

1. Which of the following is self-adjusting force ?
(A) Static friction
(B) Limiting friction
(C) Kinetic friction
(D) Rolling friction

2. Maximum force of friction is called
(A) Limiting friction
(B) Static friction
(C) Sliding friction
(D) Rolling friction

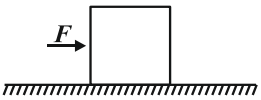
3. The limiting friction between two bodies in contact is independent of
(A) Nature of the surface in contact
(B) The area of surfaces in contact
(C) Normal reaction between the surfaces
(D) The materials of the bodies

4. In the figure shown, horizontal force F_1 is applied on a block but the block does not slide. Then as the magnitude of vertical force F_2 is increased from zero the block begins to slide; the correct statement is



(A) The magnitude of normal reaction on block increases
(B) Static frictional force acting on the block increases
(C) Maximum value of static frictional force decreases
(D) All of these

5. A block of mass 2 kg is kept on the floor. The coefficient of static friction is 0.4. If a force F of 2.5 Newtons is applied on the block as shown in the figure, the frictional force between the block and the floor will be:

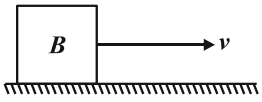


(A) 2.5 N (B) 5 N
(C) 7.84 N (D) 10 N

6. A body of mass 2 kg is kept by pressing to a vertical wall by a force of 100 N. The coefficient of friction between wall and body is 0.3. Then the frictional force is equal to :
(A) 6 N (B) 20 N
(C) 600 N (D) 700 N

7. A car is moving along a straight horizontal road with a speed v_0. If the coefficient of friction between the tyres and the road is μ then the shortest distance in which the car can be stopped is -
(A) $\frac{v_0^2}{2\mu g}$ (B) $\frac{v_0}{\mu g}$
(C) $\left(\frac{v_0}{\mu g}\right)^2$ (D) $\frac{v_0}{\mu}$

8. A block B is pushed momentarily along a horizontal surface with an initial velocity v, if μ is the coefficient of sliding friction between B and the surface, block B will come to rest after a time :



(A) $v/g\mu$ (B) $g\mu/v$
(C) g/v (D) v/g

ANSWER KEY

1. (A)
2. (A)
3. (B)
4. (C)
5. (A)
6. (B)
7. (A)
8. (A)

Please share your feedback on PW Teachers-
https://forms.gle/jEBFswBuki4Ut2Lk6