

**Mathematics Questions by Topics**

Motion and Force

Question 19

Source: K14SM2Q19

**Question 19**

A particle of mass  $M$  kg is on a horizontal table and is connected by a light string to a particle of mass 2 kg hanging vertically at the edge of the table. The coefficient of friction between the table and the mass  $M$  is equal to  $\frac{1}{3}$ . Then if

- A.**  $M > 6$  both masses move with constant acceleration.
- B.**  $0 < M < 6$  both masses move with constant acceleration.
- C.**  $0 < M \leq 6$  the system is in limiting equilibrium.
- D.**  $M > 6$  both masses move with constant velocity.
- E.**  $0 < M < 6$  both masses move with constant velocity.