

**Mathematics Questions by Topics**

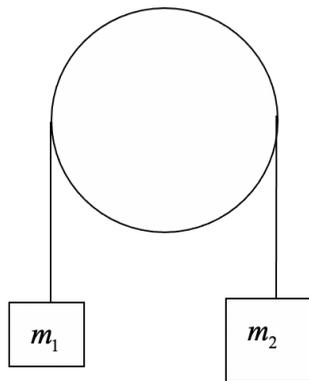
Motion and Force

Question 48

Source: K7SM2Q21

**Question 48**

A light inextensible string passes over a smooth pulley. Particles of masses  $m_1$  and  $m_2$  are attached to each end of the string as shown in the diagram.



If the mass  $m_2$  accelerates downwards at  $\frac{g}{5} \text{ m/s}^2$ , then the ratio  $\frac{m_2}{m_1}$  is equal to

- A. 1
- B.  $\frac{3}{2}$
- C.  $\frac{2}{3}$
- D. 5
- E.  $\frac{5}{4}$