

Video Solution on Website:-

<https://physicsaholics.com/home/courseDetails/42>

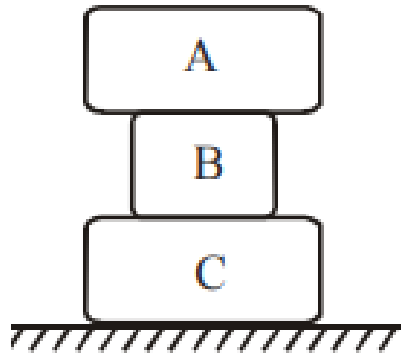
Video Solution on YouTube:-

<https://youtu.be/iM2w5Ylicrl>

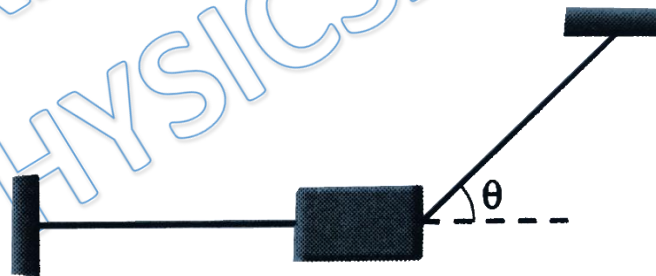
Written Solution on Website:-

<https://physicsaholics.com/note/notesDetails/36>

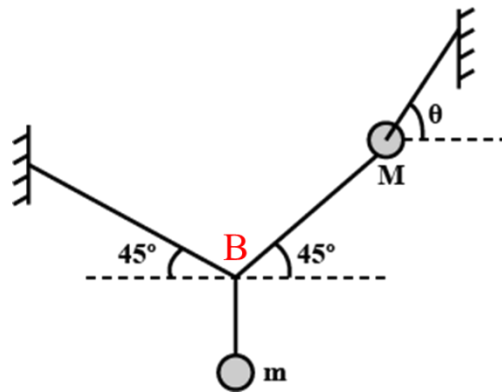
- Q 1. Three blocks A, B and C of masses  $m_1$ ,  $m_2$  and  $m_3$  are placed one over the other as shown in figure. Draw free body diagram of all the three blocks:



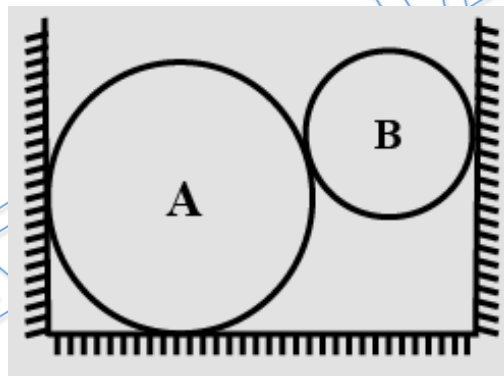
- Q 2. A block of mass  $m$  is attached with two strings as shown in figure. Draw the free body diagram of the block:



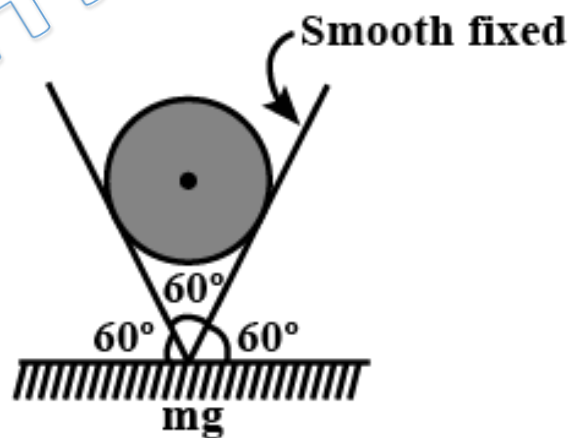
- Q 3. Two masses  $m$  and  $M$  are attached with strings as shown. Draw the free body diagram of point B and mass  $M$ :



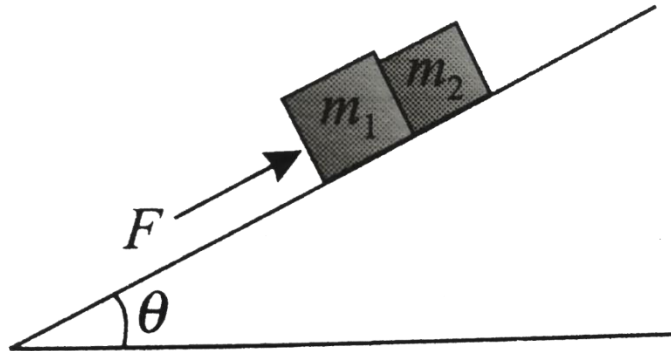
- Q 4. Two spheres A and B of masses  $m_1$  and  $m_2$  are placed between two vertical walls as shown in figure. Friction is absent everywhere. Draw the free body diagram of both the spheres:



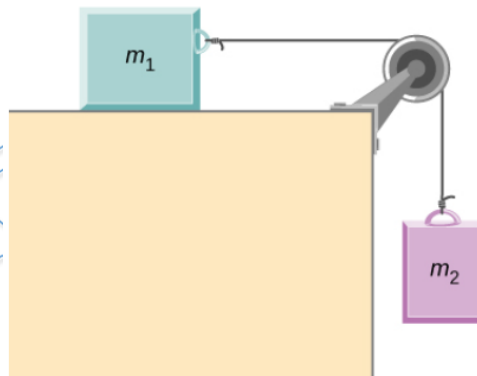
- Q 5. A cylinder of weight  $W$  is resting on a V-groove as shown in figure. Draw its free body diagram:



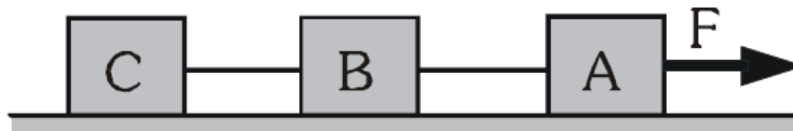
- Q 6. Two blocks are placed at rest on a smooth fixed inclined plane. A force  $F$  acts on block of mass  $m_1$  and is parallel to the inclined plane as shown in figure. Both blocks move up the incline. Then Draw free body diagram blocks of mass  $m_1$  and  $m_2$ :



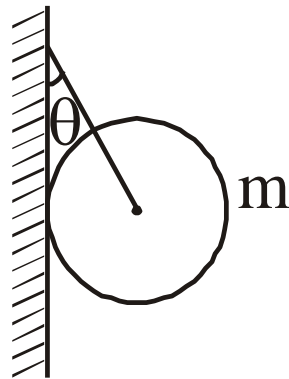
- Q 7. Two blocks of masses  $m_1$  and  $m_2$  are connected with light string. All surfaces are smooth. Then Draw free body diagram blocks of mass  $m_1$  and  $m_2$  and pulley: (pulley is massless)



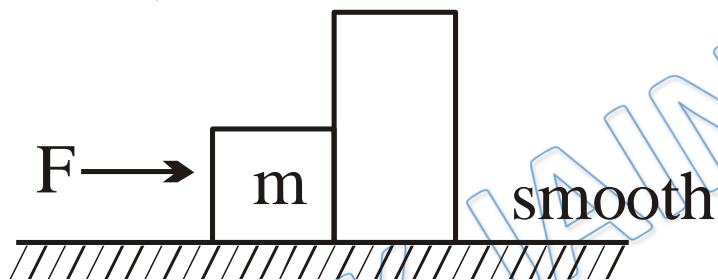
- Q 8. Three blocks A, B and C of masses  $m_1$ ,  $m_2$  and  $m_3$  are connected by massless strings and placed on a smooth surface. A force  $F$  is applied on block A, then draw free body diagram of all the three blocks:



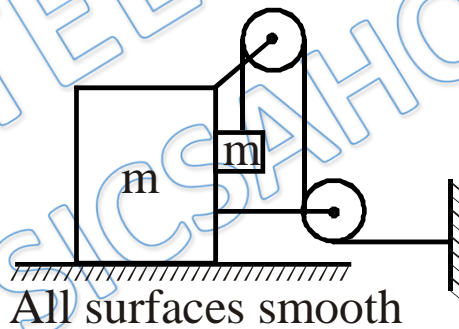
- Q 9. If vertical wall is smooth and string is massless, then draw the FBD of mass  $m$ :



Q 10. If the surface is smooth, then draw the FBD of mass m:



Q 11. If pulleys and string are massless, then draw the FBD of small block of mass m:



Q 12. If pulleys and string are massless, then draw the FBD of small block of mass m and M:

