

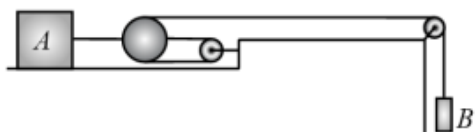
Yakeen NEET 2.0 2026

Physics By Saleem Sir

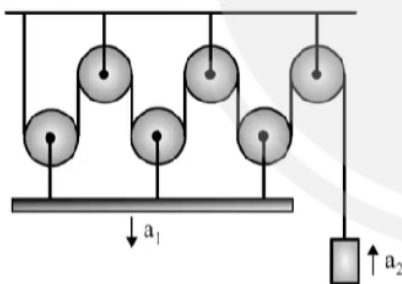
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Laws of Motion

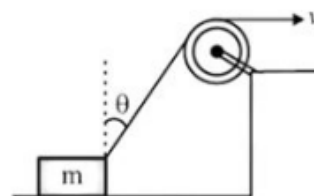
- Q1** If block A has a velocity of 0.6 m/s to the right, determine the velocity of block B.



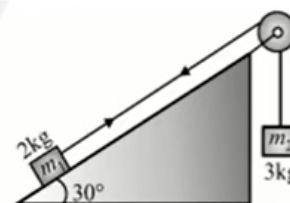
- (A) 1.8 m/s in downward direction.
 (B) 1.8 m/s in upward direction.
 (C) 0.6 m/s in downward direction.
 (D) 0.6 m/s in upward direction.
- Q2** Figure shows an arrangement of blocks, pulley and strings. Strings and pulley are massless and frictionless. The relation between acceleration of the blocks as shown in the figure is



- (A) $a_2 = 6a_1$
 (B) $a_1 = 6a_2$
 (C) $a_1 = 3a_2$
 (D) $a_2 = 3a_1$
- Q3** A block is dragged on a smooth plane with the help of a rope which moves with a velocity v as shown in figure. The horizontal velocity of the block is:

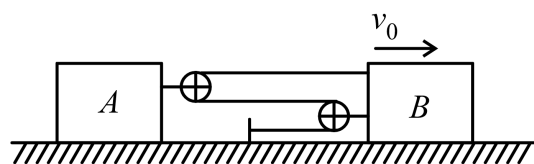


- (A) v
 (B) $\frac{v}{\sin \theta}$
 (C) $v \sin \theta$
 (D) $\frac{v}{\cos \theta}$
- Q4** A block of mass $m_1 = 2 \text{ kg}$ on a smooth inclined plane at angle 30° is connected to a second block of mass $m_2 = 3 \text{ kg}$ by a cord passing over a frictionless pulley as shown in figure. The acceleration of each block is (assume $g = 10 \text{ m/sec}^2$)-



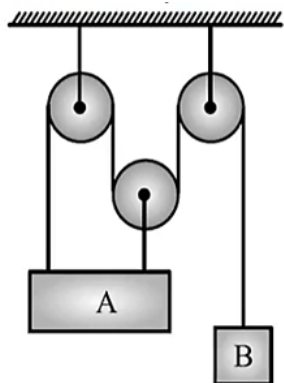
- (A) 2 m/sec^2
 (B) 4 m/sec^2
 (C) 6 m/sec^2
 (D) 8 m/sec^2
- Q5** Block B is moving towards right with constant velocity v_0 . Velocity of block A with respect to block B is - (Assume all pulleys and strings are ideal)





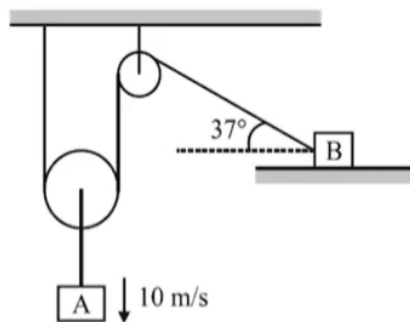
- (A) $v_0/2$ left
 (B) $v_0/2$ right
 (C) $\frac{3}{2}v_0$ right
 (D) $\frac{3}{2}v_0$ left

Q6 At a given instant, A is moving with velocity of 5 m/s upwards. What is velocity of B at the time



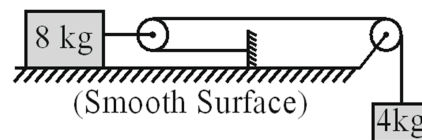
- (A) 15 m/s \downarrow
 (B) 15 m/s \uparrow
 (C) 5 m/s \downarrow
 (D) 5 m/s \uparrow

Q7 Find velocity of block B at the instant shown in figure.



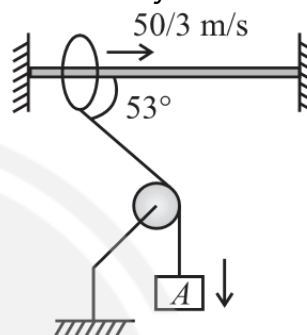
- (A) 25 m/s
 (B) 20 m/s
 (C) 22 m/s
 (D) 30 m/s

Q8 If pulleys shown in the diagram are smooth and massless and a_1 and a_2 are acceleration of blocks of mass 4 kg and 8 kg respectively, then



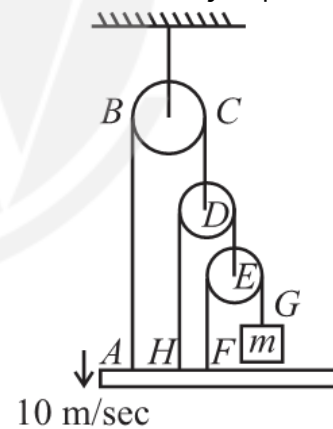
- (A) $a_1 = a_2$ (B) $a_1 = 2a_2$
 (C) $2a_1 = a_2$ (D) $a_1 = 4a_2$

Q9 Find velocity of block A



- (A) 5 m/s (B) 8 m/s
 (C) 10 m/s (D) 15 m/s

Q10 Find the velocity of point G .

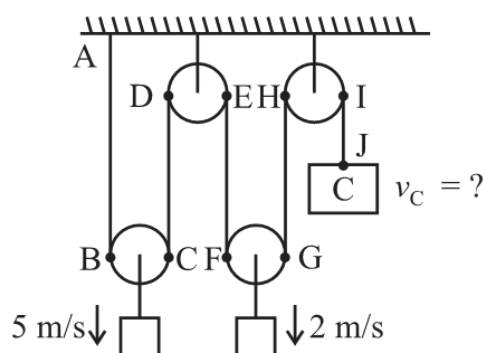


10 m/sec

- (A) 70 m/s upwards
 (B) 70 m/s downwards
 (C) 50 m/s upwards
 (D) 50 m/s downwards

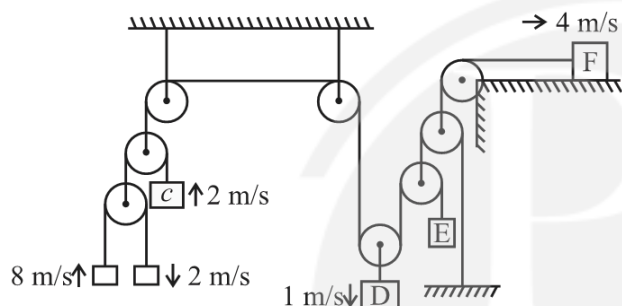
Q11





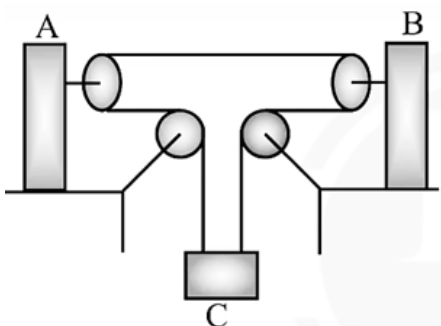
- (A) $V_C = 14$ m/sec (upward)
 (B) $V_C = 14$ m/sec (downward)
 (C) $V_C = 15$ m/sec (upward)
 (D) $V_C = 15$ m/sec (downward)

Q12



- (A) $V_E = 30/2$ m/s upward
 (B) $V_E = 30/2$ m/s downward
 (C) $V_E = 31/2$ m/s upward
 (D) $V_E = 31/2$ m/s downward

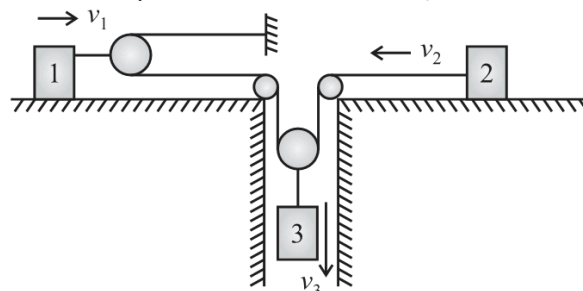
- Q13 If acceleration of A is 2 m/s^2 to left and acceleration of B is 1 m/s^2 to left, then acceleration of C is -



- (A) 1 m/s^2 upwards
 (B) 1 m/s^2 downwards
 (C) 2 m/s^2 downwards

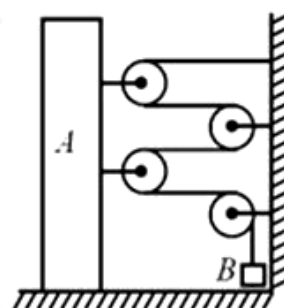
- (D) 2 m/s^2 upwards

- Q14 Three blocks 1, 2 and 3 are arranged as shown in the figure. The velocities of the blocks v_1 , v_2 and v_3 are shown in the figure. What is the relationship between v_1 , v_2 , and v_3 ?



- (A) $2v_1 + v_2 = v_3$
 (B) $v_1 + v_2 = v_3$
 (C) $v_1 + 2v_2 = v_3$
 (D) None of these

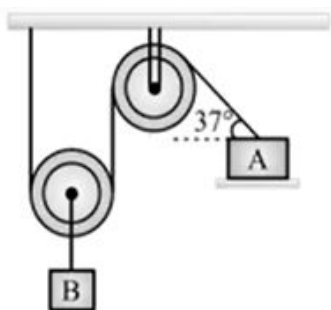
- Q15 Block A is moving away from the wall at a speed v and acceleration a .



- (A) Velocity of B is v with respect to A .
 (B) Acceleration of B is a with respect to A .
 (C) Acceleration of B is $4a$ with respect to A .
 (D) Acceleration of B is $\sqrt{17}a$ with respect to A .

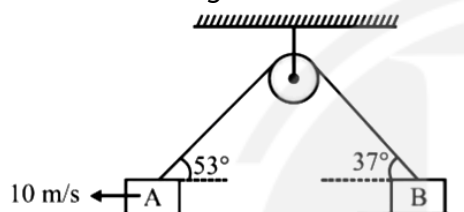
- Q16 In the figure shown block B moves down with a velocity 10 m/s . The velocity of A in the position shown is





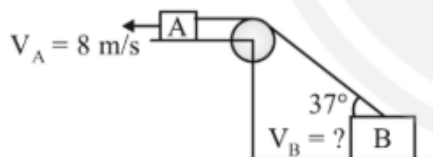
- (A) 12.5 m/s
 (B) 25 m/s
 (C) 6.25 m/s
 (D) None of these

Q17 Find out the velocity of block B in a pulley block system as shown in figure.



- (A) $\frac{10}{2}$ m/sec
 (B) $\frac{15}{2}$ m/sec
 (C) $\frac{20}{2}$ m/sec
 (D) None of these

Q18 Find velocity of block B ?



- (A) 10 m/s
 (B) 15 m/s
 (C) 20 m/s
 (D) 25 m/s



Answer Key

Q1 (A)

Q2 (A)

Q3 (B)

Q4 (B)

Q5 (B)

Q6 (A)

Q7 (A)

Q8 (B)

Q9 (C)

Q10 (A)

Q11 (A)

Q12 (C)

Q13 (A)

Q14 (D)

Q15 (D)

Q16 (B)

Q17 (B)

Q18 (A)



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