Yakeen NEET 2.0 2026

Physics by Saleem Sir

Laws of Motion

Q1 With what acceleration a should the box in the figure moving up so that the block of mass M exerts a force $7Mg/4$ on the floor of the box?


(A) $g/4$ (B) $g/2$
(C) $3g/4$ (D) $4g$

Q2 Three identical masses each of mass $4\ \mathrm{kg}$ are connected by massless inextensible strings. The string joining A and B passes over a massless frictionless pulley as shown in figure. The tension in the string connecting mass B and C is
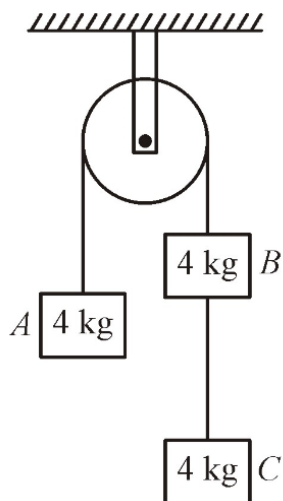

(A) 40 N
(B) 20 N
(C) 26.67 N
(D) 13.33 N

Q3 In the given figure a boy of mass $40\ \mathrm{kg}$ is just pulling a mass of $5\ \mathrm{kg}$ at an angle of $30°$ with the horizontal. While the boy is standing on a weighing machine, what would be its reading?
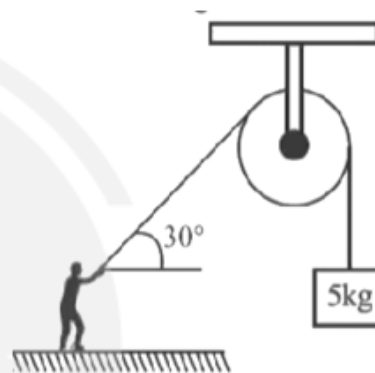
(A) $37.5\ \mathrm{kg}$
(B) $40\ \mathrm{kg}$
(C) $42.5\ \mathrm{kg}$
(D) $38.5\ \mathrm{kg}$

Q4 In the system shown, pulley is massless and string is light and inextensible. Acceleration with which $4\ \mathrm{kg}$ mass starts moving up is [Take $g = 10\ \mathrm{m/s^2}$]
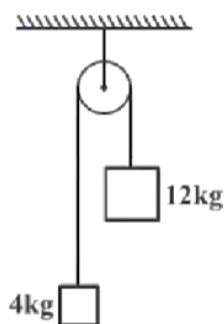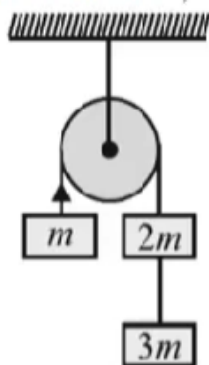
(A) 1 m/s^2
(B) 2 m/s^2
(C) 5 m/s^2
(D) 4 m/s^2

Q5 A dynamometer D is attached to two blocks of masses 6 kg and 4 kg as shown in the figure. The reading of the dynamometer is
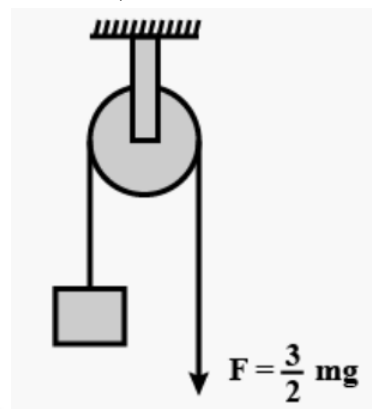

(A) 18 N
(B) 28 N
(C) 38 N
(D) 48 N

Q6 In the figure given below, with what acceleration does the block of mass m will move? (Pulley and strings are massless and frictionless)

(A) $\frac{g}{3}$
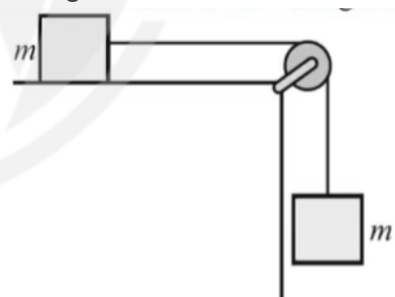(B) $\frac{2g}{5}$
(C) $\frac{2g}{3}$

(D) $\frac{g}{2}$

Q7 In the arrangement shown, the mass m will ascend with an acceleration (Pulley and rope are massless)

(A) Zero
(B) $\frac{g}{2}$
(C) g
(D) $2g$

Q8 In the figure given below masses m and m′ are tied with a thread passing over a pulley, m is on a frictionless horizontal surface. If acceleration due to gravity is g, the acceleration of m in this arrangement will be
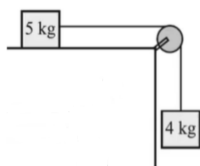

(A) g
(B) $m'g/(m+m')$
(C) mg/m'
(D) $mg/(m-m')$

Q9 Two bodies of masses 5 kg and 4 kg are arranged in two different ways as shown in fig. (A) and (B). If the pulleys and the table are
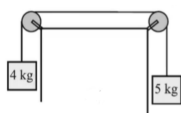
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perfectly smooth, the acceleration of the 5 kg body in case (A) and (B) are respectively:
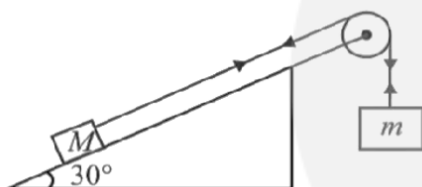
(C) 0.725 m

(D) 0.525 m

(A)

(B)

(A) g and $(5/9)g$

(B) $(4/9)g$ and $(1/9)g$

(C) $g/5$ and $g/5$

(D) $(5/9)g$ and $(1/9)g$

Q10 In the fig. mass $M = 10$ g. is placed on an inclined plane. In order to keep it at rest, the value of mass m will be:
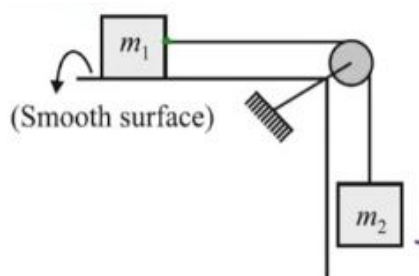

(A) 5 g

(B) $10\sqrt{3}g$

(C) 0.10 g

(D) $\sqrt{3}g$

Q11 If $m_1 = m_2 = 1$ kg then find out distance travelled by m_1 in first $1/2$sec.

(Smooth surface)

(A) 0.650 m

(B) 0.625 m

Answer Key

Q1	(C)		Q7	(B)
Q2	(C)		Q8	(B)
Q3	(A)		Q9	(B)
Q4	(C)		Q10	(A)
Q5	(C)		Q11	(B)
Q6	(C)			

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