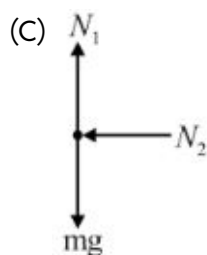# Yakeen NEET 2.0 2026

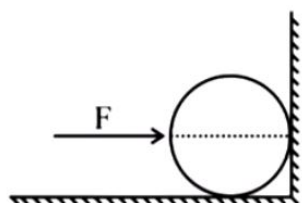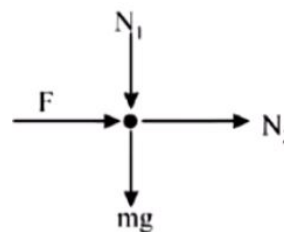## Physics by MR Sir

DPP: 2

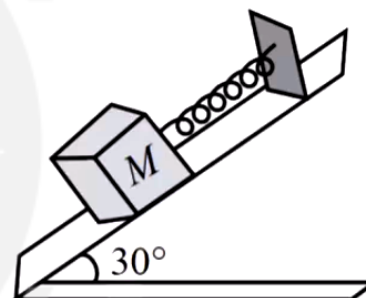## Laws of Motion

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Q1 A ball of mass m, kept at the corner as shown in the figure, is acted by a horizontal force F. The correct free body diagram of ball is-

(A)

(B)

(C)
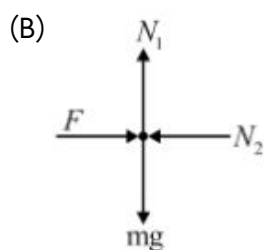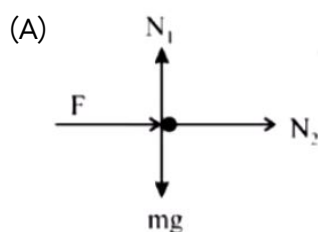
(D)

Q2 A body of mass 5 kg is suspended by a spring balance on an inclined plane as shown in figure. The spring balance measure

(A) 50 N
(B) 25 N
(C) 500 N
(D) 10 N

Q3 Two masses M_1 and M_2 connected by means of a string which is made to pass over light, smooth pulley are in equilibrium on a fixed smooth wedge as shown in figure. If $\theta = 60°$ and $\alpha = 30°$, then the ratio of M_1 to M_2 is:
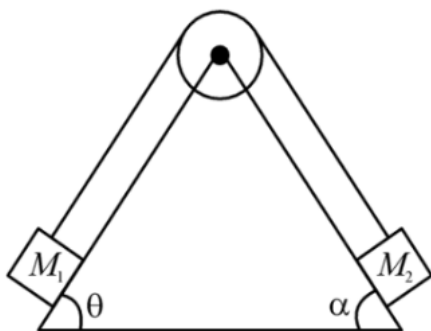
(A) $1 : 2$

(B) $2 : \sqrt{3}$

(C) $1 : \sqrt{3}$

(D) $\sqrt{3} : 1$

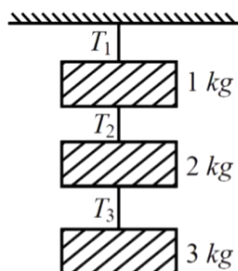**Q4** Essential characteristic of equilibrium is

(A) Momentum equals zero

(B) Acceleration equals zero

(C) K.E. equals zero

(D) Velocity equals zero

Q5 A rope of length L is pulled by a constant force F. What is the tension in the rope at a distance x from the end where the force is applied
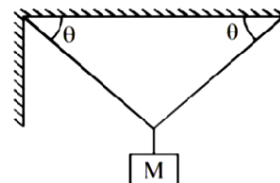
(A) $\dfrac{FL}{x}$

(B) $\dfrac{F(L-x)}{L}$

(C) $\dfrac{FL}{L-x}$

(D) $\dfrac{Fx}{L-x}$

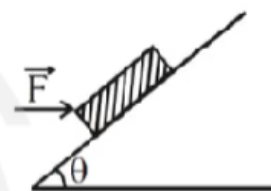**Q6** Find the tension T_2 for the system shown in figure.

(A) $1g\ N$

(B) $2g N$

(C) $5g$ N

(D) $6g$ N

Q7 Find tension in string if $\theta = 30°$ and the mass hanged in middle of the string is equal to 22 kg.
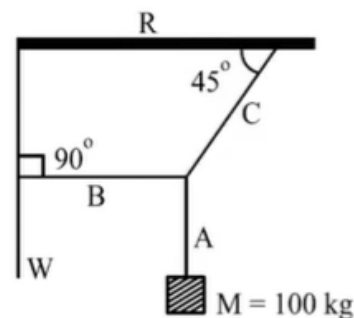

(A) 110 N

(B) 220 N

(C) Infinite

(D) Between 110 N & 220 N

Q8 The figure shows a horizontal force $\vec{F}$ acting on a block of mass M on an inclined plane (angle θ). What is the normal reaction on the block?

(A) $mg \sin \theta + F \cos \theta$

(B) $mg \sin \theta - F \cos \theta$

(C) $mg \cos \theta - F \sin \theta$

(D) $mg \cos \theta + F \sin \theta$

Q9 A mass $M = 100$ kg is suspended with the use of stings A, B and C as shown, W is a vertical wall and R is a rigid horizontal rod. The tension in string B is

(A) 100 g newton

(B) zero

(C) $100\sqrt{2}g$ newton

(D) $\frac{100}{\sqrt{2}}$ g newton

Q10 A block is placed on a table. The force of reaction will be

(A) Downwards by the table

(B) Upwards by the table

(C) No reaction force

(D) None of these

Q11 Ten one-rupee coins are put on top of each other on a table. Each coin has a mass m. Which of the following statements is not true ?

(A) The force on the 6th coin (counted from the bottom) due to all the coins on its top is equal to $4mg$ (downwards).

(B) The force on the 6th coin due to the 7 th coin is $4mg$ (downwards)

(C) The reaction of the 6th coin on the 7th coin is $4mg$ (upwards).

(D) The total force on the 10th coin is $9mg$ (downwards)

Answer Key

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

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