Newton's third law of motion's application , Newton's third law of motion using second law

CLASS-IX

SUBJECT : PHYSICS
CHAPTER NUMBER: 9
CHAPTER NAME : FORCE AND LAWS OF MOTION

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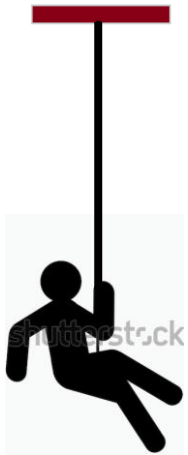
Numericals

1. A 5kg body collides with a 20 kg body and exerts 20 N force on it. So force exerted by 20 kg body on 5 kg body is

   a) 80 N b) 5 N c) 20 N d) 10N

2. A man of mass 50 kg is pulling (being suspended from it) a light rope suspended from a roof. By what force the rope is pulling the roof?

3. A man of mass 50 kg is pulling (being suspended from it) a rope of mass 5kg suspended from a roof. By what force the rope is pulling the roof?



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Numerical

Question: A pendulum bob of mass 50 g is suspended from the ceiling of an elevator. Find the tension in the string if the elevator

a) goes up with acceleration 1.2 ms^{-2}

b) goes up with deceleration 1.2 ms^{-2}

c) goes up with uniform velocity

d) goes down with acceleration 1.2 ms^{-2}

e) goes down with deceleration 1.2 ms^{-2}

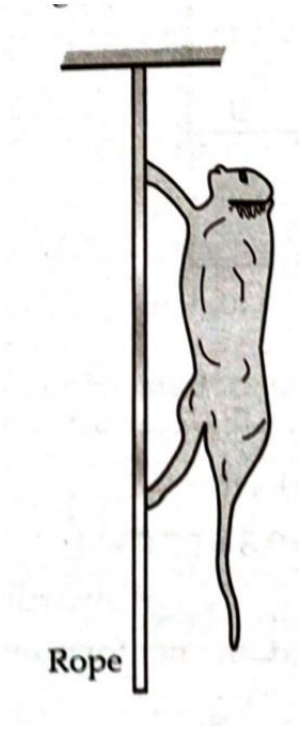
f) goes down with uniform velocity.

Numerical

Question: A monkey of mass 40 kg climbs on a rope (as shown in figure) which can stand a maximum tension of 600 N. In which of the following cases will the rope break: the monkey

a) climbs up with an acceleration of 6 ms^{-2}
b) climbs down with an acceleration of 4 ms^{-2}
c) climbs up with a uniform speed of 5 ms^{-1}
d) falls down the rope nearly freely under gravity

(Ignore the mass of the rope).



THANKING YOU

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