LAWS OF MOTION

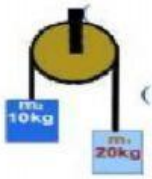
7. Why does a car possess more inertia than a bicycle? (Both are at rest) ( )
   a) Due to velocity b) due to mass c) due to momentum d) due to height
8. Mass of an object is considered as the measure of ( )
   a) Inertia b) momentum c) speed d)velocity
9. If mass of a body increases, then inertia of that body ..... ( )
   a) Decreases b) increases c) will not change d) zero
10. S.I unit of mass is ( )
    a) Centimeter b) kilogram c) meter d) gram

5. If the mass of an object is doubled. Then which of the following is true. ( )
   a) The velocity of the object is doubled
   b) The momentum of the object is doubled
   c) The velocity of the object is tripled.
   d) The momentum is tripled.
6. An object of mass 10kg is moving with a velocity of 10m/s and another object of mass 20kg is moving with a velocity of 5 m/s. Then the ratio of their momentum is ( )
   a) 2:1 b) 1:1 c) 1:2 d) 3:2
7. The formula for momentum is.... ( )
   a) $p = m/v$ b) $pv = m$ c) $p = v/m$ d) $p = mv$
8. The ***SI*** unit of momentum is..... ( )
   a) kg/m b) $kg - m/s$ c) m/s d) N/s

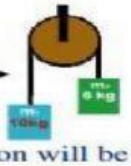
   force required to keep the object moving with the same velocity is .... ( )
   a) 0 N b) 2 N c) 4 N d) 8 N
7. 1 Newton is equal to --- ( )
   (a) 1 kg – m/s b) 1 kg –m/s^2
   (c) 1kg / m d) 1 kg- cm

8. Your friend in a moving train tosses a coin which falls behind him. Observing this statement what can you say about the motion of the train ( )
   a) Accelerated b) uniform c) retarded d) moving in a circular path
9. Force required in accelerating a ***4 kg*** mass at ***5 m/s^2*** and a ***3 kg*** mass at ***7 m/s^2***, will be ( )
   a) Same in both the cases b) greater for ***4kg*** mass at ***5m/s^2***
   c) greater for ***3kg*** mass at ***7m/s^2*** d) double

2. In the adjacent figure, Acceleration of the system is...(where $g = 10m/s^2$))
   a) 20/3 m/s^2 b) 10/3 m/s^2 c) 30/3 m/s^2 d) 40/3 m/s^2



3. The net force on $m_1 = F_{net}$ = ... ( )
   a) 200/3 *N* b) 100/3 *N* c) 300/3 *N* d) 400/3 *N*
4. The net force on $m_2 = F_{net}$ = ... ( )
   a) 200/3 *N* b) 100/3 *N* c) 300/3 *N* d) 400/3 *N*
5 The direction of acceleration on m_1 is..... ( )
   a) upward b) downward c) horizontal d) No direction
6 Tension in the string = ... ( )
   a) 200/3 *N* b) 100/3 *N* c) 300/3 *N* d) 400/3 *N*
7. Look at the adjacent Figure. Tension in the string ( )
   a) 100 N b) 75 N c) 16 N d) 80 N



8 In an Atwood machine, if the masses of the loads are equal then the acceleration will be ( )
   (where $g = 10m/s^2$) a) *Zero* b) *undefined* c) 10 m/s^2 d) *not possible to calculate*