ST. LAWRENCE HIGH SCHOOL

A JESUIT CHRISTIAN MINORITY INSTITUTION

Sub: Physical Science **Class: 8** **Date: 08.05.21**

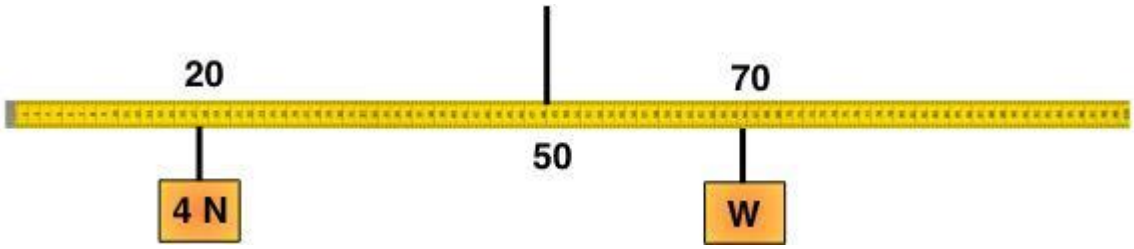
Duration: 40 min **Worksheet Solution 26** **Full Marks: 15**

FORCE AND PRESSURE/ TURNING EFFECT OF FORCE

Choose the Correct options:

1. If no net force is applied on a body, then it is said to be in
   (a) distance
   (b) equilibrium
   (c) linear motion
   (d) motion
2. The torque depends upon
   (a) force
   (b) moment arm
   (c) both A and B
   (d) none of above
3. The line along which a force acts is called
   (a) line of action of force
   (b) line of acting torque
   (c) axis of rotation
   (d) moment arm
4. If the force 'F' is multiplied by arm 'L', we get
   (a) momentum
   (b) distance
   (c) torque/moment
   (d) inertia
5. Two unlike parallel forces of the same magnitude but not along the same line forms a
   (a) couple
   (b) inertia
   (c) gravity
   (d) friction
6. If the sum of clockwise moments acting on a body is equal to the sum of anticlockwise moments acting on it, then the body is
   (a) balanced
   (b) unbalanced
   (c) rigid
   (d) flexible
7. The turning effect of a force is called the force's
   (a) momentum
   (b) distance
   (c) torque/moment
   (d) inertia
8. Point where force causes system to move without rotation is
   (a) center of mass
   (b) midpoint of body
   (c) edge of the body
   (d) none of above
9. The door is opened or closed due to the
   (a) weight
   (b) turning effect on it
   (c) distance from roof
   (d) height

10. Two children sitting on a see saw are not swinging, the net torque is
    (a) greater than 1
    (b) less than 1
    (c) zero
    (d) infinite
11. Torque is turning effect of
    (a) force
    (b) moment of force
    (c) line of action of force
    (d) frictional force
12. A couple is produced by
    (a) one unlike parallel force
    (b) two unlike parallel forces
    (c) like parallel force
    (d) none of above
13. A metre-stick is suspended at the 50 cm mark. A 4 N weight is placed at the 20 cm mark as shown. It is balanced by another weight at the 70 cm mark. What is the value of the second weight?
    (a) 4 N
    (b) 1.1 N
    (c) 1.7 N
    (d) 6 N



14. Formula One racing cars need a high degree of stability when turning bends on the race track. Which of the following features of these racing cars contribute to this stability?
    (a) They are usually painted red.
    (b) Their wheels have a wide base and they have low centre of gravity
    (c) They can go from 0 to 160 km per hour in about six seconds.
    (d) Their wheels have a large diameter and they have a low centre of gravity.
15. In what way may the turning effect of a force be increased?
    (a) **By increasing the perpendicular distance between the force and the fulcrum**.
    (b) By reducing the applied force.
    (c) By lubricating the fulcrum with oil or grease.
    (d) By decreasing the perpendicular distance between the force and the fulcrum.