



ST. LAWRENCE HIGH SCHOOL

A JESUIT CHRISTIAN MINORITY INSTITUTION



Sub: Physical Science

Class: 8

Date: 15.04.20

Duration: 40 min

Worksheet Solution 29

Full Marks: 15

FORCE AND PRESSURE/ TURNING EFFECT OF FORCE

Choose the Correct options:

- If no net force is applied on a body, then it is said to be in
 - distance
 - equilibrium**
 - linear motion
 - motion
- The torque depends upon
 - force
 - moment arm
 - both A and B**
 - none of above
- The line along which a force acts is called
 - line of action of force**
 - line of acting torque
 - axis of rotation
 - moment arm
- If the force 'F' is multiplied by arm 'L', we get
 - momentum
 - distance
 - torque/moment**
 - inertia
- Two unlike parallel forces of the same magnitude but not along the same line forms a
 - couple**
 - inertia
 - gravity
 - friction
- 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
 - balanced**
 - unbalanced
 - rigid
 - flexible
- The turning effect of a force is called the force's
 - momentum
 - distance
 - torque/moment**
 - inertia
- Point where force causes system to move without rotation is
 - center of mass**
 - midpoint of body
 - edge of the body
 - none of above
- The door is opened or closed due to the
 - weight
 - turning effect on it**
 - distance from roof
 - 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

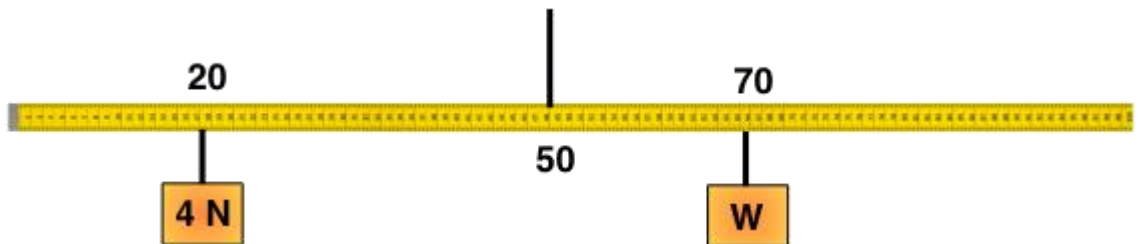
- (a) **force**
- (b) moment of force
- (c) line of action of force
- (d) frictional force

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 TWO 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.**
- (c) They can go from 0 to 160 km per hour in about six seconds.
- (d) **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.