

GIRLS HIGH SCHOOL AND COLLEGE PRAYAGRAJ

WORKSHEET -1

SESSION :2020-21

CLASS -X A,B,C,D,E,F

SUBJECT : PHYSICS

INSTRUCTIONS : Parents are expected to ensure that the student spends two days to read and understand the chapter according to the books and websites :

NOTE :1. Concise Physics ICSE Class X - By R.P. Goyal and S.P. Tripathi

2. Srijan ICSE Physics Class X - By S.C. Gupta and Smita Aggarwal

3. [www.extramarks.com](http://www.extramarks.com), [www.topperlearning.com](http://www.topperlearning.com)

Topic: Force

Question 1- Define moment of couple. Write its S.I. unit.

Question 2- State the principle of moments. Name one device based on it.

Question 3- Define the term 'centre of gravity of a body'.

Question 4- What is the position of centre of gravity of a :

(a) rectangular lamina (b) cylinder ?

Question 5- Name the force required for circular motion. State its direction.

Question 6- State two differences between the centripetal and centrifugal force.

Question 7- The centrifugal force is :

(a) a real force (b) the force of reaction of centripetal force

(c) a fictitious force (d) directed towards the centre of circular path.

Question 8- Where is the centre of gravity of a uniform ring situated ?

Question 9- State the condition when on applying a force, the body has :

(a) the translational motion, (b) the rotational motion.

Question 10- State the condition when a body is in (i) static, (ii) dynamic equilibrium. Give one example each of static and dynamic equilibrium.

Question 11- Define moment of force and its S.I. unit.

Question 12- State two factors affecting the turning effect of a force.

Question 13- State whether the moment of force is scalar or vector.

Question 14- Write the expression for the moment of force about a given axis.

Question 15- Why is it easier to open a door by applying the force at the free end of it ?

Question 16- State one way to reduce the moment of a given force about a given axis of rotation.

Question 17- The moment of a force of 15 Nl acting at a normal distance  $x$  from the point of rotation is 6.0 N m. What is the value of  $x$ .

Question 18- Why is a Jack screw provided with a long arm ?

Question 19- The turning effect of a force acting on a rigid object pivoted at one point is called\_\_\_\_\_

(a) turning force (b) rotational force (c) moment of a force (d) moment of a couple.

Question 20- A nut is opened by a wrench of length 10 cm. If the least force required is 5.0N, find the moment of force needed to turn the nut.

The End

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