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Assignments #

Basic Mechanical  
Technology.

Date: \_\_\_\_\_

Q No  $\rightarrow$  1

Ans No  $\rightarrow$  1

Principle of moments. The principle of moments states that when in equilibrium the total sum of the anti clockwise movement is equal to the total sum of the clockwise movement. When a system is stable or balance it is said to be in equilibrium as all the forces acting on the system cancel each other out.

movement of force. Noun (plural movement of force)  $\frac{1}{2}$  The turning effect of a force applied to a rotational system at a distance from the axis of rotation. The moment is equal to the magnitude of the force multiplied by the perpendicular distance between its line of action and the axis of rotation.

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Q No  $\Rightarrow$  2<sup>diff</sup> Equilibrium and different ?

Ans No  $\Rightarrow$  2

Equilibrium is defined as a state of balance or a stable situation where opposing forces cancel each other out and where no changes are occurring. An example of equilibrium is in economics when supply and demand are equal.

There are three types of equilibrium: stable, unstable, and neutral. Figures throughout this module illustrate various examples  $\Rightarrow$

A system is said to be stable equilibrium, it experiences a net force or torque in a direction opposite to the direction of the displacement.

Date: \_\_\_\_\_

Q No :-> 3

Ans No :-> 3

Define force :->

A force involves an interaction between two or more objects, and it causes a push or pull between the objects.

There is always a direction associated with the force.

types of force :->

The Four Fundamental forces of nature are Gravitational force, weak Nuclear force, Electromagnetic force and Strong Nuclear force. The weak and strong forces

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are effective only at the level over a very short range and dominate only at the level of subatomic particle. Gravity and Electromagnetic force have infinite range.

Effect of force on various mechanical

The Effect of force is. A force acting on an object may cause the object to change shape, to start moving, to stop moving, to accelerate or decelerate.

Structural members

Date: \_\_\_\_\_

Structural members are the primary load bearing components of a building, and each have their own structural properties which needs to be considered. Such members include.

Beams :

Horizontal members which transfer loads to supports.

Columns :

vertical members which transfer compressive loads to the ground.

